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Item 1252  
 UNITED STATES NUCLEAR REGULATORY COMMISSION

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 RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS - ENERGY

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## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

An interpretation of this section is contained in 10 CFR Part 8, § 8.3.

### § 2.711 Extension and reduction of time limits.

(a) Except as otherwise provided by law, whenever an act is required or allowed to be done at or within a specified time, the time fixed or the period of time prescribed may for good cause be extended or shortened by the Commission or the presiding officer, or by stipulation approved by the Commission or the presiding officer.

(b) In any instance in which this part does not prescribe a time limit for an action to be taken in the proceeding, the Commission or the presiding officer may set a time limit for that action.

### § 2.712 Service of papers, methods, proof.

(a) *Service of papers by the Commission.* Except for subpoenas, \*\*\* the Commission will serve all orders, decisions, notices, and other papers issued by it upon all parties.

(b) *Who may be served.* Any paper required to be served upon a party shall be served upon him or upon the representative designated by him or by law to receive service of papers. When a party has appeared by attorney, service must be made upon the attorney of record.

(c) *How service may be made.* Service may be made by personal delivery, by first class, certified or registered mail including air mail, by telegraph, or as otherwise authorized by law. Where there are numerous parties to a proceeding, the Commission may make special provision regarding the service of papers.

(d) *When service complete.* Service upon a party is complete:

(1) By personal delivery, on handing the paper to the individual, or leaving it at his office with his clerk or other person in charge or, if there is no one in charge, leaving it in a conspicuous place therein or, if the office is closed or the person to be served has no office, leaving it at his usual place of residence with some person of suitable age and discretion then residing there;

(2) By telegraph, when deposited with a telegraph company, properly addressed and with charges prepaid;

(3) By mail, on deposit in the United

States mail, properly stamped and addressed; or

(4) When service cannot be effected in a manner provided by subparagraphs (1) to (3) inclusive of this paragraph, in any other manner authorized by law.

(e) *Proof of service.* Proof of service, stating the name and address of the person on whom served and the manner and date of service, shall be shown for each document filed, and may be made by:

(1) Written acknowledgment of the party served or his counsel;

(2) The certificate of counsel if he has made the service; or

(3) The affidavit of the person making the service.

(f) *Free copying and service.* Except in an antitrust proceeding, in any adjudicatory proceeding on an application for a license or an amendment thereto, the Commission, upon request by a party other than the applicant, will copy and serve without cost to that party that party's testimony (including attachments), proposed findings of fact and conclusions of law, and responses to discovery requests. These documents should be filed with Docketing and Service not less than five days before they are due to be submitted to an adjudicatory board, unless the presiding officer provides otherwise.<sup>1</sup>

### § 2.713 Appearance and practice before the Commission in Adjudicatory Proceedings.

(a) *Representation.* A person may appear in an adjudication on his own behalf or by an attorney-at-law in good standing admitted to practice before any court of the United States, the District of Columbia, or the highest court of any State, territory, or possession of the United States. An attorney appearing in a representative capacity shall file with the Commission a written notice of appearance which shall state his name, address, and telephone number; the basis of his eligibility; and the name and address of the person on whose behalf he appears.

(b) *Standards of conduct.* An attorney shall conform to the standards of conduct required in the courts of the United States.

(c) *Suspension of attorneys.* A presiding officer may, by order, suspend or bar any person from participation as an attorney in a proceeding if the presiding

officer finds that such person:

(1) Is not an attorney at law in good standing admitted to practice before any court of the United States, the District of Columbia, or the highest court of any State, territory, or possession of the United States.

(2) Has failed to conform to the standards of conduct required in the courts of the United States.

(3) Is lacking in character or professional integrity;

(4) Engages in dilatory tactics or disorderly or contemptuous conduct; or

(5) Displays toward the Commission or any of its presiding officers conduct which, if displayed toward any court of the United States, would be cause for censure, suspension, or disbarment.

Any such order shall state the grounds on which it is based. Before any person is suspended or barred from participation as an attorney in a proceeding, charges shall be preferred by the presiding officer against such person and he shall be afforded an opportunity to be heard thereon before another presiding officer.

### § 2.714 Intervention.

(a)(1) Any person whose interest may be affected by a proceeding and who desires to participate as a party shall file a written petition for leave to intervene. In a proceeding noticed pursuant to § 2.105, any person whose interest may be affected may also request a hearing. The petition and/or request shall be filed not later than the time specified in the notice of hearing, or as provided by the Commission, the presiding officer or the atomic safety and licensing board designated to rule on the petition and/or request, or as provided in § 2.102(dx3). Nontimely filings will not be entertained absent a determination by the Commission, the presiding officer or the atomic safety and licensing board designated to rule on the petition and/or request, that the petition and/or request should be granted based upon a balancing of the following factors in addition to those set out in paragraph (d) of this section:

(i) Good cause, if any, for failure to file on time.

(ii) The availability of other means whereby the petitioner's interest will be protected.

(iii) The extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record.

(iv) The extent to which the petitioner's interest will be represented by existing parties.

(v) The extent to which the petitioner's participation will broaden the issues or delay the proceeding.

(2) The petition shall set forth with particularity the interest of the petitioner in the proceeding, how that interest may be affected by the results

<sup>1</sup> This paragraph shall be in effect for one year from July 25, 1980 unless extended by the Commission. Notice of an extension will appear in the Federal Register.

<sup>\*</sup> Changed 28 FR 10151.

<sup>\*\*</sup> Deleted 28 FR 10151.

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of the proceeding, including the reasons why petitioner should be permitted to intervene, with particular reference to the factors in paragraph (d) of this section, and the specific aspect or aspects of the subject matter of the proceeding as to which petitioner wishes to intervene.

(3) Any person who has filed a petition for leave to intervene or who has been admitted as a party pursuant to this section may amend his petition for leave to intervene. A petition may be amended without prior approval of the presiding officer at any time up to fifteen (15) days prior to the holding of the special prehearing conference pursuant to § 2.751a, or where no special prehearing conference is held, fifteen (15) days prior to the holding of the first prehearing conference. After this time a petition may be amended only with approval of the presiding officer, based on a balancing of the factors specified in paragraph (a)(1) of this section. Such an amended petition for leave to intervene must satisfy the requirements of this paragraph (a) of this section pertaining to specificity.

(b) Not later than fifteen (15) days prior to the holding of the special prehearing conference pursuant to § 2.751a, or where no special prehearing conference is held, fifteen (15) days prior to the holding of the first prehearing conference, the petitioner shall file a supplement to his petition to intervene which must include a list of the contentions which petitioner seeks to have litigated in the matter, and the bases for each contention set forth with reasonable specificity. A petitioner who fails to file such a supplement which satisfies the requirements of this paragraph with respect to at least one contention will not be permitted to participate as a party. Additional time for filing the supplement may be granted based upon a balancing of the factors in paragraph (a)(1) of this section.

(c) Any party to a proceeding may file an answer to a petition for leave to intervene within ten (10) days after service of the petition, with particular reference to the factors set forth in paragraph (d) of this section. However, the staff may file such an answer within fifteen (15) days after service of the petition.

(d) The Commission, the presiding officer or the atomic safety and licensing board designated to rule on petitions to intervene and/or requests for hearing shall, in ruling on a petition for leave to intervene, consider the following factors, among other things:

(1) The nature of the petitioner's right under the Act to be made a party to the proceeding.

(2) The nature and extent of the petitioner's property, financial, or other interest in the proceeding.

(3) The possible effect of any order which may be entered in the proceeding on the petitioner's interest.

(e) An order permitting intervention and/or directing a hearing may be conditioned on such terms as the Commission, presiding officer or the designated atomic safety and licensing board may direct in the interests of: (1) Restricting irrelevant, duplicative, or repetitive evidence and argument, (2) having common interests represented by a spokesman, and (3) retaining authority to determine priorities and control the compass of the hearing.

(f) In any case in which, after consideration of the factors set forth in paragraph (d) of this section, the Commission or the presiding officer finds that the petitioner's interest is limited to one or more of the issues involved in the proceeding, any order allowing intervention

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shall limit his participation accordingly.

(g) A person permitted to intervene becomes a party to the proceeding, subject to any limitations imposed pursuant to paragraph (f) of this section.

(h) Unless otherwise expressly provided in the order allowing intervention, the granting of a petition for leave to intervene does not change or enlarge the issues specified in the notice of hearing.

### § 2.714a Appeals from certain rulings on petitions for leave to intervene and/or requests for hearing.

(a) Notwithstanding the provisions of § 2.730(f), an order of the presiding officer or the atomic safety and licensing board designated to rule on petitions for leave to intervene and/or requests for hearing may be appealed, in accordance with the provisions of this section, to the Atomic Safety and Licensing Appeal Board within ten (10) days after service of the order. The appeal shall be asserted by the filing of a notice of appeal and accompanying supporting brief. Any other party may file a brief in support of or in opposition to the appeal within ten (10) days after service of the appeal. No other appeals from rulings on petitions and/or requests for hearing shall be allowed.

(b) An order wholly denying a petition for leave to intervene and/or request for a hearing is appealable by the petitioner on the question whether the petition and/or hearing request should have been granted in whole or in part.

(c) An order granting a petition for leave to intervene and/or request for a hearing is appealable by a party other than the petitioner on the question whether the petition and/or the request for a hearing should have been wholly denied.

### § 2.715 Participation by a person not a party.

(a) A person who is not a party may, in the discretion of the presiding officer, be permitted to make a limited appearance by making oral or written statement of his position on the issues at any session of the hearing or any prehearing conference within such limits and on such conditions as may be fixed by the presiding officer, but he may not otherwise participate in the proceeding.

(b) The Secretary will give notice of a hearing to any person who requests it prior to the issuance of the notice of hearing, and will furnish a copy of the notice of hearing to any person who re-

quests it thereafter. When a communication bears more than one signature, the Commission will give the notice to the person first signing unless the communication clearly indicates otherwise.

(c) The presiding officer will afford representatives of an interested State, county, municipality, and/or agencies thereof, a reasonable opportunity to participate and to introduce evidence, interrogate witnesses, and advise the Commission without requiring the representative to take a position with respect to the issue. Such participants may also file proposed findings and exceptions pursuant to §§ 2.754 and 2.762 and petitions for review by the Commission pursuant to § 2.788. The presiding officer may require such representative to indicate with reasonable specificity, in advance of the hearing, the subject matters on which he desires to participate.

(d) If a matter is taken up by the Appeal Board on appeal or sua sponte or by the Commission pursuant to § 2.786 or sua sponte, a person who is not a party may, in the discretion of the Appeal Board or the Commission, respectively, be permitted to file a brief "amicus curiae". A person who is not a party and desires to file a brief must submit a motion for leave to do so which identifies the interest of the person and states the reasons why a brief is desirable. Except as otherwise provided by the Commission or the Appeal Board, such brief must be filed within the time allowed to the party whose position the brief will support. A motion of a person who is not a party to participate in oral argument before an Appeal Board or the Commission will be granted at the discretion of the Appeal Board or the Commission.

### § 2.715a Consolidation of parties in construction permit or operating license proceedings.

On motion or on its or his own initiative, the Commission or the presiding officer may order any parties in a proceeding for the issuance of a construction permit or an operating license for a production or utilization facility who have substantially the same interest that may be affected by the proceeding and who raise substantially the same questions, to consolidate their presentation of evidence, cross-examination, briefs, proposed findings of fact, and conclusions of law and argument. However, it may not order any consolidation that would prejudice the rights of any party. A consolidation under this section may be for all purposes of the proceeding, all of the issues of the proceeding, or with respect to any one or more issues thereof.

### § 2.716 Consolidation of proceedings:

On motion and for good cause shown or on its own initiative, the Commission or the presiding officers of each affected proceeding may consolidate for hearing or for other purposes two or more proceedings, or may hold joint hearings with interested States and/or other federal agencies on matters of concurrent jurisdiction, if it is found that such action will be conducive to the proper dispatch of its business and to the ends of justice and will be conducted in accordance with the other provisions of this subpart.

### § 2.717 Commencement and termination of jurisdiction of presiding officer.

(a) Unless otherwise ordered by the Commission, the jurisdiction of the presiding officer designated to conduct a hearing over the proceeding, including motions and procedural matters, commences when the proceeding commences. If no presiding officer has been designated, the Chief Administrative Law Judge† has such jurisdiction or, if he is unavailable, another hearing examiner has such jurisdiction.

A proceeding is deemed to commence when a notice of hearing or a notice of proposed action pursuant to § 2.105 is issued.

When a notice of hearing provides that the presiding officer is to be a hearing examiner, the Chief Administrative Law Judge† will designate by order the hearing examiner who is to preside. The presiding officer's jurisdiction in each proceeding will terminate upon the expiration of the period within which the Commission may direct that the record be certified to it for final decision, or when the Commission renders a final decision, or when the presiding officer shall have withdrawn himself from the case upon considering himself disqualified, whichever is earliest.

(b) The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate may issue an order and take any otherwise proper administrative action with respect to a licensee who is a party to a pending proceeding. Any order related to the subject matter of the pending proceeding may be modified by the presiding officer as appropriate for the purpose of the proceeding.

†Amended 43 FR 17798.

†Amended by 38 FR 2330.



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### § 2.718 Power of presiding officer.

A presiding officer has the duty to conduct a fair and impartial hearing according to law, to take appropriate action to avoid delay, and to maintain order. He has all powers necessary to those ends, including the powers to:

- (a) Administer oaths and affirmations
- (b) Issue subpoenas authorized by law.
- (c) Rule on offers of proof, and receive evidence.
- (d) Order depositions to be taken.
- (e) Regulate the course of the hearing and the conduct of the participants.
- (f) Dispose of procedural requests or similar matters.
- (g) Examine witnesses.
- (h) Hold conferences before or during the hearing for settlement, simplification of the issues, or any other proper purpose.
- (i) Certify questions to the Commission for its determination, either in his discretion or on direction of the Commission.
- (j) Reopen a proceeding for the reception of further evidence at any time prior to initial decision.

(k) Appoint special assistants from the Atomic Safety and Licensing Board Panel pursuant to § 2.722;

(l) Issue initial decisions; and

(m) Take any other action consistent with the Act, this chapter, and sections 551-558 of title 5 of the United States Code.

### § 2.719 Separation of functions.

(a) A presiding officer shall perform no duties inconsistent with his responsibilities as a presiding officer, and will not be responsible to or subject to the supervisor or direction of any officer or employee engaged in the performance of investigative or prosecuting functions.

(b) In any adjudication, the presiding officer may not consult any person other than a member of his staff or a special assistant as provided for in § 2.722 on any fact in issue unless on notice and opportunity for all parties to participate, except (1) as required for the disposition of *ex parte* matters as authorized by law and (2) as provided in paragraph (c) of this section.

(c) In any adjudication for the determination of an application for initial licensing, other than a contested proceeding, the presiding officer may consult (1) the staff, and (2) members of the panel appointed by the Commission from which members of atomic safety and licensing boards are drawn: *Provided, however,* That in adjudications in which exceptions to the initial decision may be taken to the Atomic Safety and Licensing Appeal Board, the presiding officer shall not consult any member of the Atomic Safety and Licensing Appeal Board or any fact in issue.

(d) Except as provided in paragraph (c) of this section and § 2.780(e), in any case of adjudication, no officer or employee of the Commission who has engaged in the performance of any investigative or prosecuting function in the case of a factually related case may participate or advise in the initial or final decision, except as a witness or counsel in the proceeding: Where an initial or final decision is stated to rest in whole or in part on fact or opinion obtained as a result of a consultation or communication authorized by paragraph (c) of this section or § 2.780(e), the substance of the communication shall be specified in the record in the proceeding and every party shall be afforded an opportunity to controvert the fact or opinion. If the parties have not had an opportunity to controvert such fact or opinion prior to the filing of the decision, a party may controvert the fact or opinion by filing an exception to the initial decision, or a petition for reconsideration of a final decision, clearly and concisely setting forth the information or argument relied on to show the contrary.

### § 2.720 Subpoenas.

(a) On application by any party, the designated presiding officer or, if he is not available, the Chairman of the Atomic Safety and Licensing Board Panel, the Chief Administrative Law Judge† or other designated officer will issue subpoenas requiring the attendance and testimony of witnesses or the production of evidence. The officer to whom application is made may require a showing of general relevance of the testimony or evidence sought, and may withhold the subpoena if such a showing is not made, but he shall not attempt to determine the admissibility of evidence.

(b) Every subpoena will bear the name of the Commission, the name and office of the issuing officer and the title of the hearing, and will command the person to whom it is directed to attend

and give testimony or produce specified documents or other things at a designated time and place. The subpoena will also advise of the quashing procedure provided in paragraph (f) of this section.

(c) Unless the service of a subpoena is acknowledged on its face by the witness or is served by an officer or employee of the Commission, it shall be served by a person who is not a party to the hearing and is not less than eighteen (18) years of age. Service of a subpoena shall be made by delivery of a copy of the subpoena to the person named in it and tendering him the fees for one day's attendance and the mileage allowed by law. When the subpoena is issued on behalf of the Commission, fees and mileage need not be tendered, and the subpoena may be served by registered mail.

(d) Witnesses summoned by subpoena shall be paid, by the party at whose instance they appear, the fees and mileage paid to witnesses in the district courts of the United States.

(e) The person serving the subpoena shall make proof of service by filing the subpoena and affidavit or acknowledgment of service with the officer before whom the witness is required to testify or produce evidence or with the Secretary. Failure to make proof of service shall not affect the validity of the service.

(f) On motion made promptly, and in any event at or before the time specified in the subpoena for compliance by the person to whom the subpoena is directed, and on notice to the party at whose instance the subpoena was issued the presiding officer or, if he is unavailable, the Commission may (1) quash or modify the subpoena if it is unreasonable or requires evidence not relevant to any matter in issue, or (2) condition denial of the motion on just and reasonable terms.

(g) On application and for good cause shown, the Commission will seek judicial enforcement of a subpoena issued to a party and which has not been quashed.

(h)(1) The provisions of paragraphs (a) through (g) of this section are not applicable to the attendance and testimony of the Commissioners or NRC personnel, or to the production of records or documents in the custody thereof.

(2)(i) In a proceeding in which the NRC is a party, the NRC staff will make available one or more witnesses designated by the Executive Director for Operations for oral examination at the hearing or on deposition regarding any matter, not privileged, which is relevant to the issues in the proceeding. The attendance and testimony of the Commis-



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signers and named NRC personnel at a hearing or on deposition may not be required by the presiding officer, by subpoena or otherwise: *Provided*, That the presiding officer may, upon a showing of exceptional circumstances, such as a case in which a particular named NRC employee has direct personal knowledge of a material fact not known to the witnesses made available by the Executive Director for Operations require the attendance and testimony of named NRC personnel.

(ii) In addition, a party may file with the presiding officer written interrogatories to be answered by NRC personnel with knowledge of the facts designated by the Executive Director for Operations. Upon a finding by the presiding officer that answers to the interrogatories are necessary to a proper decision in the proceeding and that answers to the interrogatories are not reasonably obtainable from any other source, the presiding officer may require that the staff answer the interrogatories.

(iii) No deposition of a particular named NRC employee or answer to interrogatories by NRC personnel pursuant to paragraphs (h) (2) (i) and (ii) of this section shall be required before the matters in controversy in the proceeding have been identified by order of the Commission or the presiding officer, pursuant to § 2.751a, or after the beginning of the prehearing conference held pursuant to § 2.752 except upon leave of the presiding officer for good cause shown.

(iv) The provisions of § 2.740(c) and (e) shall apply to interrogatories served pursuant to this subparagraph.

(3) Records or documents in the custody of the Commissioners and NRC personnel are available for inspection and copying or photographing pursuant to §§ 2.744 and 2.790.

### § 2.721 Atomic safety and licensing boards.

(a) The Commission or the Chairman of the Atomic Safety and Licensing Board Panel may from time to time establish one or more atomic safety and licensing boards, each comprised of three members, one of whom will be qualified in the conduct of administrative proceedings and two of whom shall have such technical or other qualifications as the Commission or the Chairman of the Atomic Safety and Licensing Board Panel deems appropriate to the issues to be decided, to preside in such proceedings for granting, suspending, revoking, or amending licenses or registrations as the Commission may

designate, and to perform such other adjudicatory functions as the Commission deems appropriate. The members of an atomic safety and licensing board shall be designated from the Atomic Safety and Licensing Board Panel established by the Commission.

(b) The Commission or the Chairman of the Atomic Safety and Licensing Board Panel may designate an alternate qualified in the conduct of administrative proceedings, or an alternate having technical or other qualifications, or both, for an atomic safety and licensing board established pursuant to paragraph (a) of this section. If a member of a board becomes unavailable, the Commission or the Chairman of the Atomic Safety and Licensing Board Panel may constitute the alternate qualified in the conduct of administrative proceedings, or the alternate having technical or other qualifications, as appropriate, as a member of the board by notifying the alternate who will, as of the date of such notification, serve as member of the board. In the event that an alternate is unavailable or no alternates have been designated, and a member of a board becomes unavailable, the Commission or the Chairman of the Atomic Safety and Licensing Board Panel may appoint a member of the Atomic Safety and Licensing Board Panel who is qualified in the conduct of administrative proceedings or a member having technical or other qualifications, as appropriate, as a member of the atomic safety and licensing board by notifying the appointee who will, as of the date of such notification, serve as a member of the board.

(c) In a proceeding in which exceptions to the initial decision may be taken to the Atomic Safety and Licensing Appeal Board, the Commission will not designate any members of the Appeal Board as members or alternates of the atomic safety and licensing board established to preside in such proceeding.

(d) An atomic safety and licensing board shall have the duties and may exercise the powers of a presiding officer as granted by § 2.718 and otherwise in this part. At any time when such a board is in existence but is not actually in session, any powers which could be exercised by a presiding officer or by the Chief Administrative Law Judge\* may be exercised with respect to such a proceeding by the chairman of the board having jurisdiction over it.

Two members of an atomic safety and licensing board constitute a quorum; if one of those members is the member qualified in the conduct of administrative proceedings.

### § 2.722 Special assistants to the presiding officer.

(a) In consultation with the Panel

Chairman, the presiding officer may, at his discretion, appoint from the Atomic Safety and Licensing Board Panel established by the Commission, personnel to assist the presiding officer in taking evidence and preparing a suitable record for review. Such appointment may occur at any appropriate time during the proceeding but shall, at the time of the appointment, be subject to the notice and disqualification provisions as described in § 2.704. Such special assistants may function as:

(1) Technical interrogators in their individual fields of expertise. Such interrogators shall be required to study the written testimony and sit with the presiding officer to hear the presentation and cross-examination by the parties of all witnesses on the issues of the interrogators' expertise, taking a leading role in examining such witnesses to ensure that the record is as complete as possible;

(2) Upon consent of all the parties, Special Masters to hear evidentiary presentations by the parties on specific technical matters, and, upon completion of the presentation of evidence, to prepare a report that would become part of the record. Special Masters may rule on evidentiary issues brought before them, in accordance with §§ 2.743 and 2.757. Appeals from such rulings may be taken to the presiding officer in accordance with procedures which shall be established in the presiding officer's order appointing the Special Master. Special Masters' reports are advisory only; the presiding officer shall retain final authority with respect to the issues heard by the Special Master; or

(3) Alternate Atomic Safety and Licensing Board members to sit with the presiding officer, to participate in the evidentiary sessions on the issue for which the alternate members were designated by examining witnesses, and to advise the presiding officer of their conclusions through an on-the-record report. This report is advisory only; the presiding officer shall retain final authority on the issue for which the alternate member was designated.

(b) The presiding officer may, as a matter of discretion, informally seek the assistance of Members of the Atomic Safety and Licensing Board Panel to brief the presiding officer on the general technical background of subjects involving complex issues which the presiding officer might otherwise have difficulty in quickly grasping. Such informal briefings shall take place prior to the hearing on the subject involved and shall supplement the reading and study undertaken by the presiding officer. They are not subject to the procedures described in § 2.704.



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### MOTIONS

#### § 2.730 Motions.

(a) *Presentation and disposition.* All motions shall be addressed to the Commission or, when a proceeding is pending before a presiding officer, to the presiding officer. All written motions shall be filed with the Secretary, and served on all parties to the proceeding.\*\*

(b) *Form and content.* Unless made orally on the record during a hearing, or the presiding officer directs otherwise, a motion shall be in writing, shall state with particularity the grounds and the relief sought, and shall be accompanied by any affidavits or other evidence relied on, and, as appropriate, a proposed form of order.

(c) *Answers to motions.* Within ten (10)† days after service of a written motion, or such other period as the Secretary or the Assistant Secretary\*\* or presiding officer may prescribe, a party may file an answer in support of or in opposition to the motion, accompanied by affidavits or other evidence. However, the staff may file such an answer within fifteen (15)† days after service of a written motion. The moving party shall have no right to reply, except as permitted by the presiding officer or the Secretary or the Assistant Secretary.\*\*

(d) *Oral arguments; briefs.* No oral argument will be heard on a motion unless the presiding officer or the Commission directs otherwise. A written brief may be filed with a motion or an answer to a motion, stating the arguments and authorities relied on.

(e) *Disposition of motion.* A written motion will be disposed of by written order and on notice to all parties.

(f) *Interlocutory appeals to the Commission.* No interlocutory appeal may be taken to the Commission from a ruling of the presiding officer. When in the judgment of the presiding officer prompt decision is necessary to prevent detriment to the public interest or unusual delay or expense, the presiding officer may refer the ruling promptly to the Commission, and notify the parties either by announcement on the record or by written notice if the hearing is not in session.

(g) *Effect of filing a motion or certification of question to the Commission.* Unless otherwise ordered, neither the filing of a motion nor the certification of a question to the Commission shall stay the proceeding or extend the time for the performance of any act.

#### § 2.731 Order of procedure.

The presiding officer or the Commission will designate the order of procedure at a hearing. The proponent of an order will ordinarily open and close.

†Amended 43 FR 17798.

\*\*Amended 39 FR 24219.

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### § 2.732 Burden of proof.

Unless otherwise ordered by the presiding officer, the applicant or the proponent of an order has the burden of proof.

### § 2.733 Examination by experts.

A party may request the presiding officer to permit a qualified individual who has scientific or technical training or experience to participate on behalf of that party in the examination and cross-examination of expert witnesses. The presiding officer may permit such individual to participate on behalf of the party in the examination and cross-examination of expert witnesses, where it would serve the purpose of furthering the conduct of the proceeding, upon finding (a) that the individual is qualified by scientific or technical training or experience to contribute to the development of an adequate decisional record in the proceeding by the conduct of such examination or cross-examination, (b) that the individual has read any written testimony on which he intends to examine or cross-examine and any documents to be used or referred to in the course of the examination or cross-examination, and (c) that the individual has prepared himself to conduct a meaningful and expeditious examination or cross-examination. Examination or cross-examination conducted pursuant to this section shall be limited to areas within the expertise of the individual conducting the examination or cross-examination. The party on behalf of whom such examination or cross-examination is conducted and his attorney shall be responsible for the conduct of examination or cross-examination by such individuals.

### DEPOSITIONS AND WRITTEN INTERROGATORIES, DISCOVERY, ADMISSIONS, EVIDENCE

### § 2.740 General provisions governing discovery.

(a) *Discovery methods.* Parties may obtain discovery by one or more of the following methods: Depositions upon oral examination or written interrogatories (§ 2.740a); written interrogatories (§ 2.740b); production of documents or things or permission to enter upon land or other property, for inspection and other purposes (§ 2.741); and requests for admission (§ 2.742).

(b) *Scope of discovery.* Unless otherwise limited by order of the presiding officer in accordance with this section, the scope of discovery is as follows:

(1) *In general.* Parties may obtain discovery regarding any matter, not privileged, which is relevant to the subject matter involved in the proceeding, whether it relates to the claim or defense

of the party seeking discovery or to the claim or defense of any other party, including the existence, description, nature, custody, condition, and location of any books, documents, or other tangible things and the identity and location of persons having knowledge of any discoverable matter. In a proceeding on an application for a construction permit or an operating license for a production or utilization facility, discovery shall begin only after the prehearing conference provided for in § 2.751a and shall relate only to those matters in controversy which have been identified by the Commission or the presiding officer in the prehearing order entered at the conclusion of that prehearing conference. In such a proceeding, no discovery shall be had after the beginning of the prehearing conference held pursuant to § 2.752 except upon leave of the presiding officer upon good cause shown. It is not ground for objection that the information sought will be inadmissible at the hearing if the information sought appears reasonably calculated to lead to the discovery of admissible evidence.

(2) *Trial preparation materials.* A party may obtain discovery of documents and tangible things otherwise discoverable under subparagraph (1) of this paragraph and prepared in anticipation of or for the hearing by or for another party's representative (including his attorney, consultant, surety, indemnitor, insurer, or agent) only upon a showing that the party seeking discovery has substantial need of the materials in the preparation of his case and that he is unable without undue hardship to obtain the substantial equivalent of the materials by other means. In ordering discovery of such materials when the required showing has been made, the presiding officer shall protect against disclosure of the mental impressions, conclusions, opinions, or legal theories of an attorney or other representative of a party concerning the proceeding.

(c) *Protective order.* Upon motion by a party or the person from whom discovery is sought, and for good cause shown, the presiding officer may make any order which justice requires to protect a party or person from annoyance, embarrassment, oppression, or undue burden or expense, including one or more of the following: (1) That the discovery not be had; (2) that the discovery may be had only on specified terms and conditions, including a designation of the time or place; (3) that the discovery may be had only by a method of discovery other than that selected by the party seeking discovery; (4) that certain matters not be inquired into, or that the scope of discovery be limited to certain matters; (5) that

discovery be conducted with no one present except persons designated by the presiding officer; (6) that, subject to the provisions of §§ 2.744 and 2.790, a trade secret or other confidential research, development, or commercial information not be disclosed or be disclosed only in a designated way; (7) that studies and evaluations not be prepared. If the motion for a protective order is denied in whole or in part, the presiding officer may, on such terms and conditions as are just, order that any party or person provide or permit discovery.

(d) *Sequence and timing of discovery.* Unless the presiding officer upon motion, for the convenience of parties and witnesses and in the interests of justice, orders otherwise, methods of discovery may be used in any sequence and the fact that a party is conducting discovery, whether by deposition or otherwise, shall not operate to delay any other party's discovery.

(e) *Supplementation of responses.* A party who has responded to a request for discovery with a response that was complete when made is under no duty to supplement his response to include information thereafter acquired, except as follows:

(1) A party is under a duty seasonably to supplement his response with respect to any question directly addressed to (i) the identity and location of persons having knowledge of discoverable matters, and (ii) the identity of each person expected to be called as an expert witness at the hearing, the subject matter on which he is expected to testify, and the substance of his testimony.

(2) A party is under a duty seasonably to amend a prior response if he obtains information upon the basis of which (i) he knows that the response was incorrect when made, or (ii) he knows that the response though correct when made is no longer true and the circumstances are such that a failure to amend the response is in substance a knowing concealment.

(3) A duty to supplement responses may be imposed by order of the presiding officer or agreement of the parties.

(f) *Motion to compel discovery.* (1) If a deponent or party upon whom a request for production of documents or answers to interrogatories is served fails to respond or objects to the request, or any part thereof, or fails to permit inspection as requested, the deposing party or the party submitting the request may move the presiding officer, within ten (10)\* days after the date of the response or after failure of a party to respond to the request for an order compelling a response or inspection in accordance with the request. The motion shall set forth the nature of the questions or the

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(a) A request for the production of an NRC record or document not available pursuant to § 2.790 by a party to an initial licensing proceeding may be served on the Executive Director for Operations without leave of the Commission or the presiding officer. The request shall set forth the records or documents requested, either by individual item or by category, and shall describe each item or category with reasonable particularity and shall state why that record or document is relevant to the proceeding.

(b) If the Executive Director for Operations objects to producing a requested record or document on the grounds that (1) it is not relevant or (2) it is exempted from disclosure under § 2.790 and the disclosure is not necessary to a proper decision in the proceeding or the document or the information therein is reasonably obtainable from another source, he shall so advise the requesting party.

(c) If the Executive Director for Operations objects to producing a record or document, the requesting party may apply to the presiding officer, in writing, to compel production of that record or document. The application shall set forth the relevancy of the record or document to the issues in the proceeding. The application shall be processed as a motion in accordance with § 2.730(a) through (d). The record or document covered by the application shall be produced for the "in camera" inspection of the presiding officer, exclusively, if requested by the presiding officer and only to the extent necessary to determine—

(1) The relevancy of that record or document;

(2) Whether the document is exempt from disclosure under § 2.790;

(3) Whether the disclosure is necessary to a proper decision in the proceeding;

(4) Whether the document or the information therein is reasonably obtainable from another source.

(d) Upon a determination by the presiding officer that the requesting party has demonstrated the relevancy of the record or document and that its production is not exempt from disclosure under § 2.790 or that, if exempt, its disclosure is necessary to a proper decision in the proceeding, and the document or the information therein is not reasonably obtainable from another source, he shall order the Executive Director for Operations to produce the document.

(e) [Deleted 40 FR 2973.]

(f) A ruling by the presiding officer, the Atomic Safety and Licensing Appeal Board, or the Commission for the production of a record or document will specify the time, place, and manner of production.

(g) No request pursuant to this section shall be made or entertained before the matters in controversy have been identified by the Commission or the presiding officer, or after the beginning of the prehearing conference held pursuant to § 2.752 except upon leave of the presiding officer for good cause shown.

(h) The provisions of § 2.740 (c) and (e) shall apply to production of NRC records and documents pursuant to this section.

### SUMMARY DISPOSITION ON PLEADINGS

§ 2.749 Authority of presiding officer to dispose of certain issues on the pleadings.

(a) Any party to a\* proceeding may, at least forty-five (45)\* days before the time fixed for the hearing, move, with or without supporting affidavits, for a decision by the presiding officer in that party's favor as to all or any part of the matters involved in the proceeding. There shall be annexed to the motion a separate, short and concise statement of the material facts as to which the moving party contends that there is no genuine issue to be heard. Any other party may serve an answer opposing the motion, with or without affidavits, within twenty (20) days after service of the motion.\* There shall be annexed to such answer a separate, short and concise statement of the material facts as to which it is contended that there exists a genuine issue to be heard. All material facts set forth in the statement required to be served by the moving party will be deemed to be admitted unless controverted by the statement required to be served by the opposing party.

(b) Affidavits shall set forth such facts as would be admissible in evidence and shall show affirmatively that the affiant is competent to testify to the matters stated therein. The presiding officer may permit affidavits to be supplemented or opposed by depositions, answers to interrogatories or further affidavits. When a motion for summary decision is made and supported as provided in this section, a party opposing the motion may not rest upon the mere allegations or denials of his answer; his answer by affidavits or as otherwise

provided in this section must set forth specific facts showing that there is a genuine issue of fact. If no such answer is filed, the decision sought, if appropriate, shall be rendered.

(c) Should it appear from the affidavits of a party opposing the motion that he cannot, for reasons stated, present by affidavit facts essential to justify his opposition, the presiding officer may refuse the application for summary decision or may order a continuance to permit affidavits to be obtained or make such other order as is appropriate and a determination to that effect shall be made a matter of record.

(d) The presiding officer shall render the decision sought if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law. However, if any proceeding involving a construction permit for a production or utilization facility, the procedure described in this section may be used only for the determination of specific subordinate issues and may not be used to determine the ultimate issue as to whether the permit shall be issued.

### HEARINGS

§ 2.750 Official reporter; transcript.

(a) A hearing will be reported under the supervision of the presiding officer, stenographically or by other means, by an official reporter who may be designated from time to time by the Commission or may be a regular employee of the Commission. The transcript prepared by the reporter shall be the sole official transcript of the proceeding. Except as limited pursuant to Section 181 of the Act or order of the Commission, the transcript will be open for inspection at the Public Document Room. Copies of transcripts are available to parties and to the public from the official reporter on payment of the charges fixed therefor.

(b) Transcript corrections: Corrections of the official transcript may be made only in the manner provided by this paragraph. Corrections ordered or approved by the presiding officer shall be included in the record as an appendix, and when so incorporated the Secretary shall make the necessary physical corrections in the official transcript so that it will incorporate the changes ordered. In making corrections there shall be no

\*Amended 43 FR 17798.



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substitution of pages but, to the extent practicable, corrections shall be made by running a line through the matter to be changed without obliteration and writing the matter as changed immediately above. Where the correction consists of an insertion, it shall be added by rider or interlineation as near as possible to the text which is intended to precede and follow it.

(c) Free transcript: Except in an antitrust proceeding, in any adjudicatory proceeding on an application for a license or an amendment thereto, the presiding officer may arrange for provision of one free transcript to a party, other than the applicant, upon request by that party. The transcript will be made available to a party at the same time and location as it is made available to the NRC staff. If a transcript is mailed to the staff, it will also be mailed to the requesting party. A presiding officer has the discretion to control the distribution of transcripts to parties.<sup>1\*</sup>

### 2.751 Hearings to be public.

Except as may be requested pursuant to Section 181 of the Act, all hearings will be public unless otherwise ordered by the Commission.

\* Amended 45 FR 54725

<sup>1</sup> This paragraph shall be in effect for one year from July 25, 1980 unless extended by the Commission. Notice of an extension will appear in the Federal Register.

### § 2.751a Special prehearing conference in construction permit and operating license proceedings.

(a) In any proceeding involving an application for a construction permit or an operating license for a production or utilization facility, the Commission or the presiding officer will direct the parties and any petitioners for intervention, or their counsel, to appear at a specified time and place, within ninety (90)\* days after the notice of hearing is published, or such other time as the Commission or the presiding officer may deem appropriate, for a conference<sup>7</sup> to:

(1) Permit identification of the key issues in the proceeding;

(2) Take any steps necessary for further identification of the issues;

(3) Consider all intervention petitions to allow the presiding officer to make such preliminary or final determination as to the parties to the proceeding, as may be appropriate; and

(4) Establish a schedule for further actions in the proceeding.

(b) The presiding officer may order any further informal conferences among the parties, including telephone conferences, to the extent that he considers that such a conference would expedite the proceeding.

(c) A prehearing conference held pursuant to this section may be stenographically reported.

(d) The presiding officer shall enter an order which recites the action taken at the conference, the schedule for further actions in the proceeding, any agreements by the parties, and which identifies the key issues in the proceeding, makes a preliminary or final determination as to the parties in the proceeding, and provides for the submission of status reports on discovery. The order shall be served upon all parties to the proceeding. Objections to the order may be filed by a party within five (5) days after service of the order, except that the staff may file objections to such order within ten (10) days after service. The board may revise the order in the light of the objections presented and, as permitted by § 2.718(i), may certify for determination to the Commission or the Atomic Safety and Licensing Appeal Board, as appropriate, such matters raised in the objections as it deems appropriate. The order shall control the subsequent course of the proceeding unless modified for good cause.

<sup>7</sup> This conference may be omitted in proceedings other than contested proceedings.



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### § 2.752 Prehearing conference.

(a) The Commission or the presiding officer may, and in the case of a proceeding on an application for a construction permit or an operating license for a facility of a type described in §§ 50.21(b) or 50.22 of this chapter or a testing facility, shall direct the parties or their counsel to appear at a specified time and place for a conference to consider:

(1) Simplification, clarification, and specification of the issues;

(2) The necessity or desirability of amending the pleadings;

(3) The obtaining of stipulations and admissions of fact and of the contents and authenticity of documents to avoid unnecessary proof;

(4) Identification of witnesses and the limitation of the number of expert witnesses, and other steps to expedite the presentation of evidence;

(5) The setting of a hearing schedule; and

(6) Such other matters as may aid in the orderly disposition of the proceeding. A prehearing conference held under this section in a proceeding involving a construction permit or operating license shall be held within sixty (60) days after discovery has been completed,<sup>8</sup> or such other time as the Commission or the presiding officer may specify.

(b) Prehearing conferences may be stenographically reported.

<sup>8</sup> Discovery, as used in this section, does not include the production of the ACRS report, the safety evaluation prepared by the regulatory staff, or any detailed statement on environmental considerations prepared by the Director of Regulation or his designee in the proceeding pursuant to Appendix D of Part 50 of this chapter.

(c) The presiding officer shall enter an order which recites the action taken at the conference, the amendments allowed to the pleadings and agreements by the parties, and which limits the issues or defines the matters in controversy to be determined in the proceeding. Objections to the order may be filed by a party within five (5) days after service of the order, except that the regulatory staff may file objections to such order within ten (10) days after service. The board may revise the order in the light of the objections presented and, as permitted by § 2.718(i) may certify for determination to the Commission or the appeal board, as appropriate, such matters raised in the objections as it deems appropriate. The order shall control the subsequent course of the proceeding unless modified for good cause.

### § 2.753 Stipulations.

Apart from any stipulations made during or as a result of a prehearing conference, the parties may stipulate in writing at any stage of the proceeding or orally during the hearing, any relevant fact or the contents or authenticity of any document. Such a stipulation may be received in evidence. The parties may also stipulate as to the procedure to be followed in the proceeding. Such stipulations may, on motion of all parties, be recognized by the presiding officer to govern the conduct of the proceeding.

### § 2.754 Proposed findings and conclusions.

(a) Any party to a proceeding may, or if so directed by the presiding officer shall, file proposed findings of fact and conclusions of law, briefs and a proposed form or order or decision within the time provided by the following subparagraphs, except as otherwise ordered by the presiding officer:

(1) The party who has the burden of proof shall, within twenty (20) days after the record is closed, file proposed findings of fact and conclusions of law and briefs, and a proposed form of order or decision.

(2) Other parties may file proposed findings, conclusions of law and briefs within thirty (30) days after the record is closed. However, the staff may file such proposed findings, conclusions of law and briefs within forty (40) days after the record is closed.

(3) A party who has the burden of proof may reply within ten (10) days

after service of proposed findings and conclusions of law and briefs by other parties.

(b) Failure to file proposed findings of fact, conclusions of law or briefs when directed to do so may be deemed a default, and an order or initial decision may be entered accordingly.

(c) Proposed findings of fact shall be clearly and concisely set forth in numbered paragraphs and shall be confined to the material issues of fact presented on the record, with exact citations to the transcript of record and exhibits in support of each proposed finding. Proposed conclusions of law shall be set forth in numbered paragraphs as to all material issues of law or discretion presented on the record. Proposed findings of fact and conclusions of law submitted by a person who does not have the burden of proof and who has only a limited interest in the proceeding may be confined to matters which affect his interests.

### § 2.755 Oral argument before presiding officer.

When, in the opinion of the presiding officer, time permits and the nature of the proceeding and the public interest warrant, he may allow and fix a time for the presentation of oral argument. He will impose appropriate limits of time on the argument. The transcript of the argument shall be a part of the record.

### § 2.756 Informal procedures.

The Commission encourages the use of informal procedures consistent with the Act, sections 551-558 of title 5 of the United States Code, and the regulations in this chapter, and with the orderly conduct of the proceeding and the necessity for preserving a suitable record for review.

### § 2.757 Authority of presiding officer to regulate procedure in a hearing.

To prevent unnecessary delays or an unnecessarily large record, the presiding officer may:

(a) Limit the number of witnesses whose testimony may be cumulative;

(b) Strike argumentative, repetitious, cumulative, or irrelevant evidence;

(c) Take necessary and proper measures to prevent argumentative, repetitious, or cumulative cross-examination; and

(d) Impose such time limitations on arguments as he determines appropriate, having regard for the volume of the evidence and the importance and complexity of the issues involved.

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### § 2.758 Consideration of Commission rules and regulations in adjudicatory proceedings.

#### (a) Except as provided in

paragraphs (b), (c), and (d) of this section, any rule or regulation of the Commission, or any provision thereof, issued in its program for the licensing and regulation of production and utilization facilities, source material, special nuclear material or byproduct material, shall not be subject to attack by way of discovery, proof, argument, or other means in any adjudicatory proceeding involving initial licensing subject to this subpart, other than a pending proceeding wherein a party has attacked such rule or regulation, and the presiding officer, the Atomic Safety and Licensing Appeal Board or the Commission has ruled thereon before August 27, 1972.\*\*

(b) A party to an adjudicatory proceeding involving initial licensing subject to this subpart may petition that the application of a specified Commission rule or regulation or any provision thereof, of the type described in paragraph (a) of this section, be waived or an exception made for the particular proceeding. The sole ground for a petition for waiver or exception shall be that special circumstances with respect to the subject matter of the particular proceeding are such that application of the rule or regulation (or provision thereof) would not serve the purposes for which the rule or regulation was adopted. The petition shall be accompanied by an affidavit that identifies the specific aspect or aspects of the subject matter of the proceeding as to which application of the rule or regulation (or provision thereof) would not serve the purposes for which the rule or regulation was adopted, and shall set forth with particularity the special circumstances alleged to justify the waiver or exception requested. Any other party may file a response thereto, by counter-affidavit or otherwise.

(c) If, on the basis of the petition, affidavit and any response thereto provided for in paragraph (b) of this section, the presiding officer determines that the petitioning party has not made a prima facie showing that the application of the specific Commission rule or regulation or provisions thereof to a particular aspect or aspects of the subject matter of the proceeding would not serve the purposes for which the rule or regulation was adopted and that application of the rule or regulation should be waived or an exception granted, no evidence may be received

on that matter and no discovery, cross-examination or argument directed to the matter will be permitted, and the presiding officer may not initiate or consider the matter.

(d) If, on the basis of the petition, affidavit and any response provided for in paragraph (b) of this section, the presiding officer determines that such a prima facie showing has been made, the presiding officer shall, before ruling thereon, certify directly to the Commission<sup>9</sup> for determination the matter of whether the application of the Commission rule or regulation or provision thereof to a particular aspect or aspects of the subject matter of the proceeding, in the context of this section, should be waived or an exception made. The Commission may, among other things, on the basis of the petition, affidavits, and any response, determine whether the application of the specified rule or regulation (or provision thereof) should be waived or an exception be made, or the Commission may direct such further proceedings as it deems appropriate to aid its determination.

(e) Whether or not the procedure in paragraph (b) of this section is available, a party to an initial licensing proceeding may file a petition for rule making pursuant to § 2.802.

### § 2.759 Settlement in initial licensing proceedings.

The Commission recognizes that the public interest may be served through settlement of particular issues in a proceeding or the entire proceeding. Therefore, to the extent that it is not inconsistent with hearing requirements in section 189 of the Act (42 U.S.C. 2239), the fair and reasonable settlement of contested initial licensing proceedings is encouraged. It is expected that the presiding officer and all of the parties to those proceedings will take appropriate steps to carry out this purpose.

#### INITIAL DECISION AND COMMISSION REVIEW

### § 2.760 Initial decision and its effect.

(a) After hearing, the presiding officer will render an initial decision which will constitute the final action of the Commission forty-five (45) days after its date when it authorizes the issuance or amendment of a license or limited work authorization\* for a facility, or thirty (30) days after its date in any other case, un-

<sup>9</sup>The matter will be certified to the Commission notwithstanding the provisions of § 2.785.

\*Amended 43 FR 17798.

less exceptions are taken in accordance with section 2.762 or the Commission directs that the record be certified to it for final decision.

(b) Where the public interest so requires, the Commission may direct that the presiding officer certify the record to it without an initial decision, and may:

(1) Prepare its own initial decision, which will become final unless exceptions are filed; or

(2) Omit an initial decision on a finding that due and timely execution of its functions imperatively and unavoidably so requires.

(c) An initial decision will be in writing and will be based on the whole record and supported by reliable, probative, and substantial evidence. The initial decision will include:

(1) Findings, conclusions and rulings, with the reasons or basis for them, on all material issues of fact, law, or discretion presented on the record;

(2) All facts officially noticed and relied on in making the decision;

(3) The appropriate ruling, order or denial of relief with the effective date;

(4) The time within which exceptions to the decision and a brief in support of them may be filed, the time within which briefs in support of or in opposition to exceptions filed by another party may be filed and, in the case of an initial decision which may become final in accordance with paragraph (a) of this section the date when it may become final.

### § 2.760a Initial decisions in contested proceedings on applications for facility operating licenses.

In any initial decision in a contested proceeding on an application for an operating license for a production or utilization facility, the presiding officer shall make findings of fact and conclusions of law on the matters put into controversy by the parties to the proceeding and on matters which have been determined to be the issues in the proceeding by the Commission or the presiding officer. Matters not put into controversy by the parties will be examined and decided by the presiding officer only where he or she determines that a serious safety, environmental, or common defense and security matter exists. Depending on the resolution of those matters, the Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, after making the requisite findings, will issue, deny, or appropriately condition the license.

\*\*Effective date of these amendments.

## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

### § 2.761 Expedited decisional procedure.

(a) The presiding officer may determine a proceeding by an order after the conclusion of a hearing without issuing an initial decision, when:

(1) All parties stipulate that the initial decision may be omitted and waive their rights to file exceptions, to request oral argument, and to seek judicial review;

(2) No unresolved substantial issue of fact, law, or discretion remains, and the record clearly warrants granting the relief requested; and

(3) The presiding officer finds that dispensing with the issuance of the initial decision is in the public interest.

(b) An order entered pursuant to paragraph (a) of this section shall be subject to review by the Commission on its own motion within thirty (30) days after its date.

(c) An initial decision may be made effective immediately, subject to review by the Commission on its own motion within thirty (30) days after its date, \*\* except as otherwise provided in this chapter when:

(1) All parties stipulate that the initial decision may be made effective immediately and waive their rights to file exceptions, to request oral argument, and to seek judicial review;

(2) No unresolved substantial issue of fact, law, or discretion remains and the record clearly warrants granting the relief requested; and

(3) The presiding officer finds that it is in the public interest to make the initial decision effective immediately.

(d) The provisions of this section do not apply to an initial decision directing the issuance or amendment of a construction permit or construction authorization, or the issuance of an operating license or provisional operating authorization.

### § 2.761a Separate hearings and decisions.

In a proceeding on an application for a construction permit for a utilization facility which is subject to § 51.5(a) of this chapter, and is of the type specified in § 50.21(b) (2) or (3) or 50.22 of this chapter or is a testing facility,† the presiding officer shall unless the parties agree otherwise or

\*Amended 39 FR 26279.

\*\*Added 28 FR 10151.

†Amended 42 FR 22882.

‡Amended 43 FR 17708.

the rights of any party to be adjudicated thereby, commence a hearing on issues covered by § 50.10(e)(2)(ii) and Part 51\* of this chapter as soon as practicable after issuance by the staff of its final environmental impact statement but no later than thirty (30) days after issuance of such statement, and complete such a hearing and issue an initial decision on such matters. Prehearing procedures regarding issues covered by Part 51\* and § 50.10(e)(2)(ii) of this chapter, including any discovery and special prehearing conferences and prehearing conferences as provided in §§ 2.740, 2.740a, 2.740b, 2.741, 2.742, 2.751a, and 2.752, shall be scheduled accordingly. The provisions of §§ 2.754, 2.755, 2.760, 2.762, 2.763, and 2.764(a) shall apply to any proceeding conducted and any initial decision rendered in accordance with this section. Paragraph 2.764(b) shall not apply to any partial initial decision rendered in accordance with this section. This section shall not preclude separate hearings and decisions on other particular issues.

### § 2.762 Appeals to the Commission from initial decisions.

(a) Within ten (10)† days after service of an initial decision, any party may take an appeal to the Commission by the filing of exceptions to that decision or designated portions thereof. Each exception shall be separately numbered and shall (1) state concisely, without supporting argumentation, the single error of fact or law which is being asserted in that exception; and (2) identify with particularity the portion of the decision (or earlier order or ruling) to which the exception is addressed. A brief in support of the exceptions shall be filed within thirty (30)† days thereafter (forty (40)† days in the case of the staff). The brief shall be con-

fined to a consideration of the exceptions previously filed by the party and, with respect to each exception, shall specify, inter alia, the precise portion of the record relied upon in support of the assertion of error.

(b) Within thirty (30)† days of the filing and service of the brief of the appellant (forty (40)† days in the case of the staff), any other

party may file a brief in support of, or in opposition to, the exceptions. Each factual assertion made in such supporting or opposing brief shall be supported by a reference to the precise portion of the record upon which it is based.

(c) A brief in excess of ten (10) pages shall contain a table of contents, with page references, and a table of cases (alphabetically arranged), statutes, regulations, and other authorities cited

with references to the pages of the brief where they are cited.

(d) All documents filed under this section shall be accompanied by a certificate reflecting service upon all other parties to the proceeding.

(e) Any exception or brief which in form or content is not in substantial compliance with the provisions of this section may be stricken, either on motion of a party or by the Commission on its own initiative.

### § 2.763 Oral argument.

In its discretion the Commission may allow oral argument upon the request of a party made in his exceptions or brief, or upon its own initiative.

### § 2.764 Immediate effectiveness of initial decision directing issuance or amendment of construction permit or operating license.<sup>1</sup>

(a) An initial decision directing the issuance or amendment of a construction permit, a construction authorization, or an operating license shall be effective immediately upon issuance unless the presiding officer finds that good cause has been shown by a party why the initial decision should not become immediately effective, subject to the review thereof and further decision by the Commission upon exceptions filed by any party pursuant to § 2.762 or upon its own motion.

(b) The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, notwithstanding the filing of exceptions, shall issue a construction permit, a construction authorization, or an operating license, or amendments thereto, authorized by an initial decision, within ten (10) days from the date of issuance of the decision.

### FINAL DECISION

### § 2.770 Final decision.

(a) The Commission will ordinarily consider the whole record on review, but may limit the issues to be reviewed and consider only findings and conclusions to which exceptions have been filed.

(b) The Commission may adopt, modify, or set aside the findings, conclusions and order in the initial decision, and will state the basis of its action. The final decision will be in writing and will include:

(1) A statement of findings and conclusions, with the basis for them on all material issues of fact, law or discretion presented;

<sup>1</sup>The temporary suspension of this rule in certain proceedings and related matters are addressed in Appendix B to this part.



## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

### EX PARTE COMMUNICATIONS

- (2) All facts officially noticed;  
(3) The ruling on each material exception;

(4) The appropriate ruling, order, or denial of relief, with the effective date.

#### 2.771 Petition for reconsideration.

(a) A petition for reconsideration of a final decision may be filed by a party within ten (10) days after the date of the decision. No petition may be filed with respect to an initial decision which has become final through failure to file exceptions thereto.

(b) The petition for reconsideration shall state specifically the respects in which the final decision is claimed to be erroneous, the grounds of the petition, and the relief sought. Within ten (10)\* days after a petition for reconsideration has been filed, any other party may file an answer in opposition to or in support of the petition. However, the staff may file such an answer within twelve (12) days after a petition for reconsideration has been filed.

(c) Neither the filing nor the granting of the petition shall stay the decision unless the Commission orders otherwise.

#### 2.772 Authority of the Secretary to Rule on Procedural Matters.

When briefs, motions or other papers listed herein are submitted to the Commission itself, as opposed to officers who have been delegated authority to act for the Commission, the Secretary or the Assistant Secretary are authorized to:

(a) Prescribe schedules for the filing of briefs, motions, or other pleadings, where such schedules may differ from those elsewhere prescribed in these rules or where these rules do not prescribe a schedule;

(b) Rule on motions for extensions of time;

(c) Reject motions, briefs, pleadings, and other documents filed with the Commission later than the time prescribed by the Secretary or the Assistant Secretary or established by an order, rule, or regulation of the Commission unless good cause is shown for the late filing;

(d) Prescribe all procedural arrangements relating to any oral argument to be held before the Commission;

(e) Extend the time for the Commission to rule on a petition for review under 10 CFR 2.786(b); (f) Extend the time for the Commission to grant review on its own motion under 10 CFR 2.786(a); and (g) Extend time for Commission review on its own motion of a Director's denial under 10 CFR 2.206(c).

#### 2.780 Ex parte communications.

(a) Except as provided in paragraph (e) of this section, neither (1) Commissioners, members of their immediate staffs, or other NRC officials and employees who advise the Commissioners in the exercise of their quasi-judicial functions will request or entertain off the record except from each other, nor (2) any party to a proceeding for the issuance, denial, amendment, transfer, renewal, modification, suspension, or revocation of a license or permit, or any officer employee, representative, or any other person directly or indirectly acting in behalf thereof, shall submit off the record to Commissioners or such staff members, officials, and employees, any evidence, explanation, analysis, or advice, whether written or oral, regarding any substantive matter at issue in a proceeding on the record then pending before the NRC for the issuance, denial, amendment, transfer, renewal, modification, suspension, or revocation of a license or permit. For the purposes of this section, the term "proceeding on the record then pending before the NRC" shall include any application or matter which has been noticed for hearing or concerning which a hearing has been requested pursuant to this part.

(b) Copies of written communications covered by paragraph (a) of this section shall be placed in the NRC public document room and served by the Secretary on the communicator and the parties to the proceeding involved.

(c) A Commissioner, member of his immediate staff, or other NRC official or employee advising the Commissioner in the exercise of their quasi-judicial functions, to whom is attempted any oral communication concerning any substantive matter at issue in a proceeding on the record as described in paragraph (a) of this section, will decline to listen to such communication and will explain that the matter is pending for determination. If unsuccessful in preventing such communication, the recipient thereof will advise the communicator that a written summary of the conversation will be delivered to the NRC public document room and a copy served by the Secretary of the Commission on the communicator and the parties to the proceeding involved. The recipient of the oral communication thereupon will make a fair, written summary of such communication and deliver such summary to the NRC public document room and serve copies thereof upon the communicator and the parties to

the proceeding involved.

(d) This section does not apply to communications authorized by paragraph (e) of this section, to the disposition of ex parte matters authorized by law, or to communications requested by the Commission concerning:

- (1) Its proprietary functions;
- (2) General health and safety problems and responsibilities of the Commission; or
- (3) The status of proceedings.

(e) In any adjudication for the determination of an application for initial licensing, other than a contested proceeding, Commissioners, members of their immediate staffs and other NRC officials and employees who advise the Commissioners in the exercise of their quasi-judicial functions may consult the staff, and the staff may communicate with Commissioners, members of their immediate staffs and other NRC officials and employees who advise the Commissioners in the exercise of their quasi-judicial functions.

(f) The provisions and limitations of this section applicable to Commissioners, members of their immediate staffs, and other NRC officials and employees who advise the Commissioners in the exercise of their quasi-judicial functions are applicable to members of the Atomic Safety and Licensing Appeal Board, members of their immediate staffs, and other NRC officials and employees who advise members of the Appeal Board in the exercise of their quasi-judicial functions.

NOTE: [Deleted 40 FR 2973.]

### ATOMIC SAFETY AND LICENSING APPEAL BOARD

#### 2.785 Functions of Atomic Safety and Licensing Appeal Boards.

(a) The Commission has authorized Atomic Safety and Licensing Appeal Boards to exercise the authority and perform the review functions which would otherwise have been exercised and performed by the Commission, including, but not limited to, those under §§ 2.760-2.771, 2.912, and 2.913 in (1) proceedings on applications for licenses under Part 50 of this chapter and (2) such other licensing proceedings under the regulations in this chapter as the Commission may specify.

\*Amended 43 FR 17798.

## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

### § 2.910 Unclassified statements required.

(a) Whenever Restricted Data or other National Security Information is introduced into a proceeding, the party offering it shall submit to the presiding officer and to all parties to the proceeding an unclassified statement setting forth the information in the classified matter as accurately and completely as possible.

(b) In accordance with such procedures as may be agreed upon by the parties or prescribed by the presiding officer, and after notice to all parties and opportunity to be heard thereon, the presiding officer shall determine whether the unclassified statement or any portion of it, together with any appropriate modifications suggested by any party, may be substituted for the classified matter or any portion of it without prejudice to the interest of any party or to the public interest.

(c) If the presiding officer determines that the unclassified statement, together with such unclassified modifications as he finds are necessary or appropriate to protect the interest of other parties and the public interest, adequately sets forth information in the classified matter which is relevant and material to the issues in the proceeding, he shall direct that the classified matter be excluded from the record of the proceeding. His determination will be considered by the Commission as a part of the decision in the event of review.

(d) If the presiding officer determines that an unclassified statement does not adequately present the information contained in the classified matter which is relevant and material to the issues in the proceeding, he shall include his reasons in his determination. This determination shall be included as part of the record and will be considered by the Commission in the event of review of the determination.

(e) The presiding officer may postpone all or part of the procedures established in this section until the reception of all other evidence has been completed. Service of the unclassified statement required in paragraph (a) of this section shall not be postponed if any party does not have access to Restricted Data or other National Security Information.

### § 2.911 Admissibility of restricted data or other national security information.

A presiding officer shall not receive any Restricted Data or other National Security Information in evidence unless:

(a) The relevance and materiality of the Restricted Data or other National Security Information to the issues in the proceeding, and its competence, are clearly established; and

(b) The exclusion of the Restricted Data or other National Security Information would prejudice the interests of a party or the public interest.

### § 2.912 Weight to be attached to classified evidence.

In considering the weight and effect of any Restricted Data or other National Security Information received in evidence to which an interested party has not had opportunity to receive access, the presiding officer and the Commission shall give to such evidence such weight as is appropriate under the circumstances, taking into consideration any lack of opportunity to rebut or impeach the evidence.

### § 2.913 Review of Restricted data or other National Security Information received in evidence.

At the close of the reception of evidence, the presiding officer shall review the record and shall direct that any Restricted Data or other National Security Information be expunged from the record where such expunction would not prejudice the interests of a party or the public interest. Such directions by the presiding officer will be considered by the Commission in the event of review of the determinations of the presiding officer.

§ 2.914 [Deleted 40 FR 44124.]

<sup>1</sup>Except as the context may otherwise indicate, this statement is also generally applicable to the conduct of authorization proceedings conducted under Part 115, Procedures for Review of Certain Nuclear Reactors Exempted from Licensing Requirements, and to licensing proceedings of the type described in the statement which may be conducted by a hearing examiner as the presiding officer.

\*In the event of any conflict between the provisions of this appendix and any section of this part, the section governs.

## APPENDIX A—STATEMENT OF GENERAL POLICY AND PROCEDURE: CONDUCT OF PROCEEDINGS FOR THE ISSUANCE OF CONSTRUCTION PERMITS AND OPERATING LICENSES FOR PRODUCTION AND UTILIZATION FACILITIES FOR WHICH A HEARING IS REQUIRED UNDER SECTION 189A OF THE ATOMIC ENERGY ACT OF 1954, AS AMENDED\*

The following statement of general policy and procedure explains in detail the procedures which the Atomic Energy Commission expects to be followed by atomic safety and licensing boards in the conduct of proceedings relating to the issuance of construction permits for nuclear power and test reactors and other production or utilization facilities for which a hearing is mandatory under section 189a. of the Atomic Energy Act of 1954, as amended (the Act).<sup>1</sup> The provisions are also applicable to proceedings for the issuance of operating licenses for such facilities, except as the context would otherwise indicate, or except as indicated in section VIII. Section VIII sets out the procedures specifically applicable to operating license proceedings. The Statement reflects the Commission's intent that such proceedings be conducted expeditiously and its concern that its procedures maintain sufficient flexibility to accommodate that objective. This position is founded upon the recognition that fairness to all the parties in such cases and the obligation of administrative agencies to conduct their functions with efficiency and economy, require that Commission adjudications be conducted without unnecessary delays. These factors take on added importance in nuclear power reactor licensing proceedings where the growing national need for electric power and the companion need for protecting the quality of the environment call for decision making which is both sound and timely. The Commission expects that its responsibilities under the Atomic Energy Act of 1954, the National Environmental Policy Act of 1969 and other applicable statutes, as set out in the statement which follows, will be carried out in a manner consistent with this position in the overall public interest.

Atomic safety and licensing boards are appointed from time to time by the Commission or the Chairman of the Atomic Safety and Licensing Board Panel to conduct hearings in licensing cases



## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

under the authority of section 191 of the Act. Section 191 authorizes the Commission to establish one or more atomic safety and licensing boards to conduct public hearings and to make intermediate or final decisions in administrative proceedings relating to granting, suspending, revoking or amending licenses issued by the Commission. It requires that each board consist of one member who is qualified in the conduct of administrative proceedings and two members who have such technical or other qualifications as the Commission deems appropriate to the issues to be decided. Members of each board may be appointed by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel from a panel selected from private life, the staff of the Commission or other Federal agencies.

➤ An Atomic Safety and Licensing Board may at its discretion appoint special assistants to the Board from the membership of the Atomic Safety and Licensing Board Panel established by the Commission. These special assistants are to be employed to facilitate the hearing process and improve the quality of the record produced for review. The special assistants may serve as technical interrogators in their individual fields of expertise, alternate Atomic Safety and Licensing Board members to sit with the Board and participate in the evidentiary sessions on the issue for which the alternate members were designated, Special Masters to hear evidentiary presentations by the parties on specific technical matters upon the consent of all parties, or informal consultants to brief the board prior to the hearing on the general technical background of subjects involving complex issues. The term "alternate board member" as a "special assistant" within the meaning of 10 CFR 2.722(a)(3) should not be confused with the use of the term "alternate" in 10 CFR 2.721(b). In the latter situation the "alternate" is a substitute for a member of a Board who becomes unavailable. As a special assistant, the "alternate" sits with the three-member Board and not instead of the Board or any of its members.

## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

(b) In fixing the time and place of any conference, including prehearing conferences, or of any adjourned session of the evidentiary hearing, due regard shall be had for the convenience and necessity of the parties, petitioners for leave to intervene, or the representatives of such persons, as well as of the Board members, the nature of such conference or adjourned session, and the public interest. Adjourned sessions of hearings may be held in the Washington, D.C. area if all parties so stipulate. If the parties disagree, and any party considers that there are valid reasons for holding such session in the Washington, D.C. area, the matter should be referred to the Atomic Safety and Licensing Appeal Board for resolution.

(c) (1) The Commission or the Atomic Safety and Licensing Board may consider on their own initiative, or a party may request the Commission or the board to consider, a particular issue or issues separately from, and prior to, other issues relating to the effect of the construction and/or operation of the facility upon the public health and safety, the common defense and security, and the environment or in regard to anti-trust considerations. If the Commission or the board determines that a separate hearing should be held, the notice of hearing or other appropriate notice will state the time and place of the separate hearing on such issue or issues. The board designated to conduct the hearing will issue an initial decision, if deemed appropriate, which will be dispositive of the issue(s) considered at the hearing, in the absence of an appeal or Commission or Appeal Board review pursuant to §§ 2.760 and 2.762, before the hearing on, and consideration of, the remaining issues in the proceeding.

(2) In a proceeding relating to the issuance of a construction permit for a facility which is subject to the environmental impact statement requirements of section 102(2)(C) of the National Environmental Policy Act of 1969 and Part 51 of this chapter and which is a utilization facility for industrial or commercial purposes or is a testing facility, separate hearings may be held and decisions may be issued on National Environmental Policy Act and site suitability issues and other specified issues as provided by Subpart F and § 2.761a.

(d) Prior to a hearing, board members should review and become familiar with:

The record of any relevant prior proceedings in the case, including initial decisions and Commission orders, the application, the ACRS report, the staff safety evaluation, the applicant's environmental report, the Commission's detailed statement on environmental considerations, all other papers filed in the proceeding, the Commission's rules of practice, and other regulations or published statements of policy of the Commission as may be pertinent to the proceeding.

\*(e) At any time when a board is in existence but is not actually in session, the chairman has all the powers of the board to take action on procedural matters. The chairman may have occasion, when the board is not in session, to dispose of preliminary procedural requests including, among other things, motions by parties relating to the conduct of the hearing. He may wish to discuss such requests with the other members of the board before ruling on them. No interlocutory appeal<sup>2</sup> may be taken by a party as a matter of right from a ruling of the chairman or the board. The board should refer the challenged ruling to the Commission for a final decision if, in its judgment, a prompt decision is necessary to prevent detriment to the public interest or unusual delay or expense. This authority should be exercised sparingly, and only when deemed essential in fairness to the parties or the public.

### I. PRELIMINARY MATTERS

(a) A public hearing is announced by the issuance of a notice of hearing, published in the FEDERAL REGISTER as soon as practicable after the application has been docketed, signed by the Secretary of the Commission stating the nature of the hearing and the issues to be considered. The time and place of the first prehearing conference pursuant to § 2.751a. will ordinarily be stated in the notice of hearing. Unless the initial notice of hearing states the time and place of the hearing, and the Chairman and other members of the Atomic Safety and Licensing Board that will conduct the hearing, those matters will be the subject of further notice in the FEDERAL REGISTER after publication of the initial notice of hearing. It is the Commission's policy and practice to begin the evidentiary hearing in the vicinity of the site of the proposed facility. The notice of hearing also states the procedures whereby persons may seek to intervene or make a limited appearance and explains the differences between those forms of participation in the proceeding, and states the times and places of the availability, in an appropriate office near the site of the proposed facility, of the notice of hearing, an updated copy of the application, the report of the Advisory Committee on Reactor Safeguards (ACRS), the staff safety evaluation, the applicant's environmental report, the Commission's detailed statement on environmental considerations, the proposed construction permit or operating license and the transcripts of the prehearing conference and the hearing.

### II. PREHEARING CONFERENCES

(a) A special prehearing conference will be held, within ninety (90)† days after the notice of hearing has been published, or such other time as the Commission or the Board may deem appropriate, in addition to the standard prehearing conference provided by § 2.752. The special prehearing conference, authorized by § 2.751a, should be used to permit identification of key issues; take steps necessary for further identification of the issues; consider all intervention petitions to allow preliminary or final determination as to the parties; and establish a schedule for further actions in the proceeding.

<sup>2</sup>An interlocutory appeal means an appeal to the Commission from a ruling made by the board during the time between the issuance of a notice of hearing and the issuance of the initial decision.

\*Redesignated by 37 FR 15127.

†Amended 43 FR 17798.



## PART 40 • DOMESTIC LICENSING OF SOURCE MATERIAL

out in such a manner as will minimize or reduce their environmental impact.

### GENERAL LICENSES

#### § 40.20 Types of licenses.

Licenses for source material are of two types: general and specific. The general licenses provided in this part are effective without the filing of applications with the Commission or the issuance of licensing documents to particular persons. Specific licenses are issued to named persons upon applications filed pursuant to the regulations in this part.

#### § 40.21 General license to receive title to source material.

A general license is hereby issued authorizing the receipt of title to source material without regard to quantity. This general license does not authorize any person to receive, possess, use,† or transfer source material.

#### § 40.22 Small quantities of source material.

(a) A general license is hereby issued authorizing commercial and industrial firms, research, educational and medical institutions and Federal, State and local government agencies to use and transfer not more than fifteen (15) pounds of source material at any one time for research, development, educational, commercial or operational purposes. A person authorized to use or transfer source material, pursuant to this general license, may not receive more than a total of 150 pounds of source material in any one calendar year.

(b) Persons who receive, possess, use, or transfer source material pursuant to the general license issued in paragraph (a) of this section are exempt from the provisions of Parts 19, 20, and 21\* of this chapter to the extent that such receipt, possession, use or transfer are within the terms of such general license: *Provided, however,* That this exemption shall not be deemed to apply to any such person who is also in possession of source material under a specific license issued pursuant to this part.

(c) Persons who receive, possess, use or transfer source material pursuant to the general license in paragraph (a) of this section are prohibited from administering source material, or the radiation therefrom, either externally or internally, to human beings except as may be authorized by NRC in a specific license.

§ 40.23 [Deleted 43 FR 6915.]

§ 40.24 [Deleted 43 FR 6915.]

#### § 40.25 General license for use of certain industrial products or devices.

(a) A general license is hereby issued to receive, acquire, possess, use, or transfer, in accordance with the provisions of paragraphs (b), (c), (d), and (e) of this section, depleted uranium contained in industrial products or devices for the purpose of providing a concentrated mass in a small volume of the product or device.

(b) The general license in paragraph (a) of this section applies only to industrial products or devices which have been manufactured or initially transferred‡ in accordance with a specific license issued‡ pursuant to § 40.34(a) or in accordance with a specific license issued‡ by an

Agreement State which authorizes manufacture of the products or devices for distribution to persons generally licensed by the Agreement State.

(c) (1) Persons who receive, acquire, possess, or use depleted uranium pursuant to the general license established by paragraph (a) of this section shall file Form NRC 244, "Registration Certificate—Use of Depleted Uranium Under General License," with the Director of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. The form shall be submitted within 30 days after the first receipt or acquisition of such depleted uranium. The registrant shall furnish on Form NRC 244 the following information and such other information as may be required by that form:

(i) Name and address of the registrant;

(ii) A statement that the registrant has developed and will maintain procedures designed to establish physical control over the depleted uranium described in paragraph (a) of this section and designed to prevent transfer of such depleted uranium in any form, including metal scrap, to persons not authorized to receive the depleted uranium; and

(iii) Name and/or title, address, and telephone number of the individual duly authorized to act for and on behalf of the registrant in supervising the procedures identified in paragraph (c) (1) (ii) of this section.

(2) The registrant possessing or using depleted uranium under the general license established by paragraph (a) of this section shall report in writing to the Director of Inspection and Enforcement, any changes in information furnished by

‡ Deleted 43 FR 6915.

‡ Amended 43 FR 6915.

him in the Form NRC 244 "Registration Certificate—Use of Depleted Uranium Under General License." The report shall be submitted within 30 days after the effective date of such change.

(d) A person who receives, acquires, possesses, or uses depleted uranium pursuant to the general license established by paragraph (a) of this section:

(1) Shall not introduce such depleted uranium, in any form, into a chemical, physical, or metallurgical treatment or process, except a treatment or process for repair or restoration of any plating or other covering of the depleted uranium.

(2) Shall not abandon such depleted uranium.

(3) Shall transfer or dispose of such depleted uranium only by transfer in accordance with the provisions of § 40.51.

In the case where the transferee receives the depleted uranium pursuant to the general license established by paragraph (a) of this section, the transferor shall furnish the transferee a copy of this section and a copy of Form NRC 244. In the case where the transferee receives the depleted uranium pursuant to a general license contained in an Agreement State's regulation equivalent to this section, the transferor shall furnish the transferee a copy of this section and a copy of Form NRC 244 accompanied by a note explaining that use of the product or device is regulated by the Agreement State under requirements substantially the same as those in this section.

(4) Within 30 days of any transfer, shall report in writing to the Director of Inspection and Enforcement the name and address of the person receiving the source material pursuant to such transfer.

(5) [Deleted 43 FR 6915.]

(e) Any person receiving, acquiring, possessing, using, or transferring depleted uranium pursuant to the general license established by paragraph (a) of this section is exempt from the requirements of Parts 19, 20, and 21\* of this chapter with respect to the depleted uranium covered by that general license.

#### § 40.26 General license for possession and storage of byproduct material as defined in this Part.

(a) A general license is hereby issued to receive title to, own, or possess byproduct material as defined in this Part without regard to form or quantity.

(b) The general license in paragraph (a) of this section applies only:

In the case of licensees of the Commission, where activities that result in the production of byproduct material are authorized under a specific license issued by the Commission pursuant to this Part, to byproduct material possessed or stored at an authorized disposal containment area or transported incident to such authorized activity: *Provided,* that authority to receive title to, own, or possess byproduct material under this general

\* Amended 42 FR 28891.

† Amended 43 FR 6915.

## PART 40 • DOMESTIC LICENSING OF SOURCE MATERIAL

license shall terminate when the specific license for source material expires, is renewed, or is amended to include a specific license for byproduct material as defined in this Part.

(c) The general license in paragraph (a) of this section is subject to:

(1) The provisions of Parts 19, 20, 21, and §§ 40.1, 40.2, 40.2a, 40.3, 40.4, 40.5, 40.6, 40.41, 40.46, 40.61, 40.62, 40.63, 40.65, 40.71, and 40.81 of Part 40 of this Chapter; and

(2) The documentation of daily inspections of tailings or waste retention systems and the immediate notification of the appropriate NRC regional office as indicated in Appendix D of 10 CFR Part 20, or the Director, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, of any failure in a tailings or waste retention system which results in a release of tailings or waste into unrestricted areas, and/or of any unusual conditions (conditions not contemplated in the design of the retention system) which if not corrected could lead to failure of the system and result in a release of tailings or waste into unrestricted areas; and any additional requirements the Commission may by order deem necessary.

### § 40.31 Applications for specific licenses.

(a) Applications for specific licenses should be filed in quadruplicate on Form NRC-2, "Application for Source Material License", ‡

with the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C., 20555. Application may be filed in person at the Commission's offices at 1717 H Street NW., Washington, D.C., or 7920 Norfolk Avenue, Bethesda, Md. Information contained in previous applications, statements or reports filed with the Commission may be incorporated by reference, provided that such references are clear and specific.

(b) The Commission may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the Commission to determine whether the application should be granted or denied or whether a license should be modified or revoked. All applications and statements shall be signed by the applicant or licensee or a person duly authorized to act for and on his behalf.

(c) Applications and documents submitted to the Commission in connection with applications will be made available for public inspection in accordance with the provisions of the regulations contained in Parts 2 and 9 of this chapter.

(d) An application for a license filed pursuant to the regulations in this part will be considered also as an application for licenses authorizing other activities for which licenses are required by the Act: *Provided*, That the application specifies the additional activities for which licenses are requested and complies with regulations of the Commission as to applications for such licenses.

(e) Each application for a source material license, other than a license exempted from Part 170 of this chapter, shall be accompanied by the fee prescribed in § 170.31 of this chapter. No fee will be required to accompany an application for renewal or amendment of a license, except as provided in § 170.31 of this chapter.

(f) An application for a license to possess and use source material for uranium milling, production of uranium hexafluoride, commercial waste disposal

by land burial or for the conduct of any other activity which the Commission determines will significantly affect the quality of the environment shall be filed at least 9 months prior to commencement of construction of the plant or facility in which the activity will be conducted and shall be accompanied by any Environmental Report required pursuant to Part 51 \*\*\* of this chapter.

➤ (g) An applicant for a license to possess and use source material in a uranium hexafluoride production plant or a fuel fabrication plant and any other applicant for a license to possess and use more than one effective kilogram of source material (except for ore processing, as defined in § 75.4 (o) of this chapter) should file with the Commission the installation information described in § 75.11 of this chapter; and the applicant shall permit verification thereof by the International Atomic Energy Agency and take such other action as may be necessary to implement the US/IAEA Safeguards Agreement, in the manner set forth in §§ 75.6, 75.11-75.14 of this chapter. The Commission will grant an exemption from the requirements of this section, upon application, if it determines that the installation will not be included on the United States eligible list. The installation information should be filed at least 9 months prior to the date when the applicant desires to receive the source material (or earlier upon request by the Commission). Applicants who desire to receive the source material within 9 months after the effective date of this paragraph should submit the installation information as soon as possible.

### § 40.32 General requirements for issuance of specific licenses. †

An application for a specific license‡ will be approved if:

(a) The application is for a purpose authorized by the Act; and

(b) The applicant is qualified by reason of training and experience to use the source material for the purpose requested in such manner as to protect health and minimize danger to life or property; and

(c) The applicant's proposed equipment, facilities and procedures are adequate to protect health and minimize danger to life or property; and

(d) The issuance of the license will not be inimical to the common defense and security or to the health and safety of the public; and

‡ Amended 34 FR 19546.

\* Amended 43 FR 52201.

† Amended 41 FR 53330.

\*\*\* Amended 39 FR 26279.







UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS  
TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

**PART  
50**

**DOMESTIC LICENSING OF PRODUCTION  
AND UTILIZATION FACILITIES\***

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**AUTHORITY:** Secs. 103, 104, 161, 161, 182, 183, 68 Stat. 936, 937, 948, 953, 954, as amended (42 U.S.C. 2133, 2134, 2201, 2232, 2233); secs. 202, 206, 68 Stat. 1244, 1246 (42 U.S.C. 5842, 5846), unless otherwise noted. Section 50.78 \*\* also issued under sec. 122, 68 Stat. 939, 42 U.S.C. 2152. Sections 50.80-50.81 also issued under sec. 184, 68 Stat. 954, as amended; 42 U.S.C. 2234. Sections 50.100-50.102 issued under sec. 186, 68 Stat. 955; 42 U.S.C. 2236. For the purposes of sec. 223, 68 Stat. 958, as amended; 42 U.S.C. 2273, § 50.54 (1) issued under sec. 1611, 68 Stat. 949; 42 U.S.C. 2201(i), and §§ 50.70-50.71 and § 50.78\*\* issued under sec. 1610, 68 Stat. 950, as amended; 42 U.S.C. 2201(o) and the Laws referred to in Appendices.

**GENERAL PROVISIONS**

§ 50.1 Basis, purpose, and procedures applicable.

The regulations in this part are promulgated by the Nuclear Regulatory Commission pursuant to the Atomic Energy Act of 1954, as amended, (68 Stat. 919) and Titles II of the Energy Reorganization Act of 1974 (88 Stat. 1242) to provide for the licensing of production and utilization facilities.

\*Amended 43 FR 6915.  
\*\*Amended 45 FR 50705

## PART 50 • DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

§ 50.2 Definitions. As used in this part,

(a) "Production facility" means:

(1) Any nuclear reactor designed or used primarily for the formation of plutonium or uranium-233; or

(2) Any facility designed or used for the separation of the isotopes of uranium or the isotopes of plutonium, except laboratory scale facilities designed or used for experimental or analytical purposes only; or

(3) Any facility designed or used for the processing of irradiated materials containing special nuclear material, except (i) laboratory scale facilities designed or used for experimental or analytical purposes, (ii) facilities in which the only special nuclear materials contained in the irradiated material to be processed are uranium enriched in the isotope U-235 and plutonium produced by the irradiation, if the material processed contains not more than  $10^{-4}$  grams of plutonium per gram of U-235 and has fission product activity not in excess of 0.25 millicuries of fission products per gram of U-235; and

(iii) facilities in which processing is conducted pursuant to a license issued under Parts 30 and 70 of this chapter, or equivalent regulations of an Agreement State, for the receipt, possession, use, and transfer of irradiated special nuclear material, which authorizes the processing of the irradiated material on a batch basis for the separation of selected fission products and limits the process batch to not more than 100 grams of uranium enriched in the isotope 235 and not more than 15 grams of any other special nuclear material.

(b) "Utilization facility" means any nuclear reactor other than one designed or used primarily for the formation of plutonium or U-233.

Note: Pursuant to subsections 11v. and 11cc., respectively, of the Act, the Commission may from time to time add to, or otherwise alter, the foregoing definitions of production and utilization facility. It may also include as a facility an important component part especially designed for a facility, but has not at this time included any component parts in the definitions.

(c) "Act" means the Atomic Energy Act of 1954 (68 Stat. 919) including any amendments thereto.

(d) [Deleted 43 FR 6915.]

(e) "Atomic energy" means all forms of energy released in the course of nuclear fission or nuclear transformation.

(f) "Atomic weapon" means any device utilizing atomic energy, exclusive of the means for transporting or propelling the device (where such means is a separable and divisible part of the device), the principal purpose of which is for use as, or for development of, a weapon, a weapon prototype, or a weapon test device.

(g) "Byproduct material" means any radioactive material (except special nu-

clear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material.

(h) "Commission" means the Nuclear Regulatory Commission or its duly authorized representatives.

(i) "Common defense and security" means the common defense and security of the United States.

(j) "Government agency" means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government.

(k) "Nuclear reactor" means an apparatus, other than an atomic weapon, designed or used to sustain nuclear fission in a self-supporting chain reaction.

(l) "Person" means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, government agency other than the Commission or the \*\*\* Department, except that the \*\*\* Department shall be considered a person to the extent that its facilities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974; any State or any political subdivision of, or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing.

(m) "Produce," when used in relation to special nuclear material, means (1) to manufacture, make, produce, or refine special nuclear material; (2) to separate special nuclear material from other substances in which such material may be contained; or (3) to make or to produce new special nuclear material.

(n) "Research and development" means (1) theoretical analysis, exploration, or experimentation; or (2) the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes.

The \*\*\* Department facilities identified in section 202 are:

(1) Demonstration Liquid Metal Fast Breeder reactors when operated as part of the power generation facilities of an electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such a reactor.

(2) Other demonstration nuclear reactors, except those in existence on January 19, 1975, when operated as part of the power generation facilities of an electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such a reactor.

(o) "Restricted Data" means all data concerning (1) design, manufacture, or utilization of atomic weapons; (2) the production of special nuclear material; or (3) the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to section 142 of the act.

(p) "Source material" means source material as defined in subsection 11z. of the Act and in the regulations contained in Part 40 of this chapter.

\*(q) "Special nuclear material" means (1) plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the act, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing, but does not include source material.

(r) "Testing facility" means a nuclear reactor which is of a type described in § 50.21(c) and for which an application has been filed for a license authorizing operation at:

(1) A thermal power level in excess of 10 megawatts; or

(2) A thermal power level in excess of 1 megawatt, if the reactor is to contain:

(i) A circulating loop through the core in which the applicant proposes to conduct fuel experiments; or

(ii) A liquid fuel loading; or

(iii) An experimental facility in the core in excess of 16 square inches in cross-section.

(j) "United States," when used in a geographical sense, includes Puerto Rico and all territories and possessions of the United States;

(t) "Controls" when used with respect to nuclear reactors means apparatus and mechanisms, the manipulation of which directly affects the reactivity or power level of the reactor. "Controls" when used with respect to any other facility means apparatus and mechanisms, the manipulation of which could affect the chemical, physical, metallurgical, or nuclear process of the facility in such a manner as to affect the protection of health and safety against radiation.

(u) "Design bases" means that information which identifies the specific functions to be performed by a structure, system, or component of a facility, and the specific values or ranges of values chosen for controlling parameters as reference bounds for design. These values may be (1) restraints derived from generally accepted "state of the art" practices for achieving functional goals, or (2) requirements derived from analysis (based on calculation and/or experiments) of the effects of a postulated accident for which a structure, system, or component must meet its functional goals.

(v) "Reactor coolant pressure boundary" means all those pressure-containing

\*Redesignated 25 FR 1072.

\*\*Corrected 31 FR 15145.

\*\*\* Amended 45FR14199

## PART 50 • DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

(3) The copies required by paragraphs (b) and (c) (1) and (2) of this section need not be filed until that part of the application has been assigned a docket number or docketed pursuant to § 2.101(a) of this chapter. The following number of copies shall be filed to enable the Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, to determine whether the application is sufficiently complete to permit the assignment of a docket number or docketing as appropriate.

(i) Fifteen (15) copies of that portion of the application containing any of the information required by §§ 50.34 and 50.34a (safety analysis report);

(ii) Ten (10) copies of that portion of the application containing the general information required by § 50.33; and

(iii) Twenty (20) copies of any environmental report required by Part 51 of this chapter.

(d) The holder of a construction permit for a production or utilization facility shall, at the time of submission of the final safety analysis report, file an application for an operating license or an amendment to an application for a license to construct and operate a production or utilization facility for the issuance of an operating license, as appropriate. The application or amendment shall state the name of the applicant, the name, location and power level, if any, of the facility and the time when the facility is expected to be ready for operation, and may incorporate by reference any pertinent information submitted in accordance with § 50.33 with the application for a construction permit.

**\*\* (e) Filing fees.** Each application for a production or utilization facility license, including, whenever appropriate, a construction permit, other than a license exempted from Part 170 of this chapter, shall be accompanied by the fee prescribed in Part 170 of this chapter. No fee will be required to accompany an application for renewal, amendment or termination of a construction permit or operating license, except as provided in § 170.21 of this chapter.

**(f) Environmental report.** An application for a construction permit or an operating license for a nuclear power reactor, testing facility, fuel reprocessing plant, or such other production or utilization facility whose construction or operation may be determined by the Commission to have a significant impact on the environment shall be accompanied by any Environmental Report required pursuant to Part 51.\*\*\*

**§ 50.31 Combining applications.** An applicant may combine in one his several applications for different kinds of

licenses under the regulations in this chapter.

**§ 50.32 Elimination of repetition.** In his application, the applicant may incorporate by reference information contained in previous applications, statements or reports filed with the Commission: *Provided*, That such references are clear and specific.

**§ 50.33 Contents of applications; general information.** Each application shall state:

(a) Name of applicant;  
(b) Address of applicant;  
(c) Description of business or occupation of applicant;

(d) (i) If applicant is an individual, state citizenship.

(ii) If applicant is a partnership, state name, citizenship and address of each partner and the principal location where the partnership does business.

(iii) If applicant is a corporation or an unincorporated association, state:

(i) The state where it is incorporated or organized and the principal location where it does business;

(ii) The names, addresses and citizenship of its directors and of its principal officers;

(iii) Whether it is owned, controlled, or dominated by an alien, a foreign corporation, or foreign government, and if so, give details.

(4) If the applicant is acting as agent or representative of another person in filing the application, identify the principal and furnish information required under this paragraph with respect to such principal.

(e) The class of license applied for, the use to which the facility will be put, the period of time for which the license is sought, and a list of other licenses, except operator's licenses, issued or applied for in connection with the proposed facility.

(f) Information sufficient to demonstrate to the Commission the financial qualifications of the applicant to carry out, in accordance with the regulations in this chapter, the activities for which the permit or license is sought. If the application is for a construction permit, such information shall show that the applicant possesses the funds necessary to cover estimated construction costs and related fuel cycle costs or that the applicant has reasonable assurance of obtaining the necessary funds, or a combination of the two. If the application is for an operating license, such information shall show that the applicant possesses the funds necessary to cover estimated operating costs or that the applicant has reasonable assurance of obtaining the necessary funds, or a combination of the two. With respect to any production or utilization facility of a type described in § 50.21(b) or § 50.22, or a testing facility, the following specific requirements shall apply:

If the application is for an operating license, such information shall show that the applicant possesses or has reasonable assurance of obtaining the funds necessary to cover the estimated costs of operation for the period of the license or for 5 years, whichever is greater, plus the estimated costs of permanently shutting the facility down

and maintaining it in a safe condition. Without limitation on the generality of the foregoing requirements, each application for a construction permit or an operating license submitted by an entity organized for the primary purpose of constructing or operating a facility shall include information showing the legal and financial relationships it has or proposes to have with its stockholders or owners, and their financial ability to meet any contractual obligation to such entity which they have incurred or propose to incur, and any other information necessary to enable the Commission to determine the applicant's financial qualifications.

(g) If the application is for an operating license for a nuclear power reactor, the applicant shall submit radiological emergency response plans of State and local governmental entities in the United States that are wholly or partially within the plume exposure pathway Emergency Planning Zone (EPZ)<sup>1</sup>, as well as the plans of State governments wholly or partially within the ingestion pathway EPZ.<sup>2</sup> Generally, the plume exposure pathway EPZ for nuclear power reactors shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 km) in radius. The exact size and configuration of the EPZs surrounding a particular nuclear power reactor shall be determined in relation to the local emergency response needs and

capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gas-cooled reactors and for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway shall focus on such actions as are appropriate to protect the food ingestion pathway.

<sup>1</sup> Emergency Planning Zones (EPZs) are discussed in NUREG-0396, EPA 520/1-78-016, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light-Water Nuclear Power Plants," December 1978.

<sup>2</sup> If the State and local emergency response plans have been previously provided to the NRC for inclusion in the facility docket, the applicant need only provide the appropriate reference to meet this requirement.

\*\*Amended 35 FR 19655.

\*\*\*Amended 39 FR 26279.



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21 FR 355-  
(h) If the applicant proposes to construct or alter a production or utilization facility, the application shall state the earliest and latest dates for completion of the construction or alteration.

35 FR 19655-  
(i) If the proposed activity is the generation and distribution of electric energy under a class 103 license, a list of the names and addresses of such regulatory agencies as may have jurisdiction over the rates and services incident to the proposed activity, and a list of trade and news publications which circulate in the area where the proposed activity will be conducted and which are considered appropriate to give reasonable notice of the application to those municipalities, private utilities, public bodies, and cooperatives, which might have a potential interest in the facility.

21 FR 355-  
(j) If the application contains Restricted Data or other defense information, it shall be prepared in such manner that all Restricted Data and other defense information are separated from the unclassified information.

(k) [Deleted 38 FR 3955.]

### § 50.33a Information requested by the Attorney General for antitrust review.

(a)(1) An applicant for a construction permit for a nuclear power reactor shall submit the information requested by the Attorney General as described in Appendix L, if the application is for a class 103 permit and if the applicant has electrical generating capacity exceeding 1400 MW(e).

(2) An applicant for a construction permit for a nuclear power reactor shall submit the information requested by the Attorney General as described in paragraph 9 of Section II of Appendix L if the applicant has electrical generating capacity exceeding 200 MW(e) but no more than 1400 MW(e). Upon request of the Commission, the applicant shall furnish the other information described in Appendix L.

(3) An applicant for a construction permit for a nuclear power reactor is not required to submit the information described in Appendix L unless specifically requested by the Commission to provide the information, if the applicant has electrical generating capacity of 200 MW(e) or less.

(4) The information described in paragraphs (a)(1) and (2) of this section shall be submitted as a separate document prior to any other part of the license application as provided in paragraph (b) and in accordance with § 2.101 of this chapter.

(b) Except as provided in paragraph (d), any person who applies for a class 103 construction permit for a nuclear power reactor on or after July 28, 1975 shall submit the document titled "Information Requested by the Attorney General for Antitrust Review" at least nine (9) months but not more than thirty-six months prior to the date of submittal of any part of the application for a class 103 construction permit.

(c) [Revoked 43 FR 49775.]

(d) Any person who applies for a class 103 construction permit for a nuclear power reactor pursuant to the provisions of § 2.101(a-1) and Subpart F of Part 2 of this chapter shall submit the document titled "Information Requested by the Attorney General for Antitrust Review" at least nine (9) months but not more than thirty-six months prior to the filing of part two or part three of the application, whichever part is filed first, as specified in § 2.101(a-1) of this chapter.

(e) Any person who applies for a class 103 construction permit for a uranium enrichment or fuel reprocessing plant shall submit such information as may be requested by the Attorney General for antitrust review, as a separate document as soon as possible and in accordance with § 2.101 of this chapter.

### § 50.34 Contents of applications: Technical information.

(a) Preliminary safety analysis report. Each application for a construction permit shall include a preliminary safety analysis report. The minimum information<sup>1</sup> to be included shall consist of the following:

(1) A description and safety assessment of the site on which the facility is to be located, with appropriate attention to features affecting facility design. Special attention should be directed to the site evaluation factors identified in Part 100 of this chapter. Such assessment shall contain an analysis and evaluation of the major structures, systems and components of the facility which bear significantly on the acceptability of the site under the site evaluation factors

identified in Part 100 of this chapter, assuming that the facility will be operated at the ultimate power level which is contemplated by the applicant. With respect to operation at the projected initial power level, the applicant is required to submit information prescribed in subparagraphs (2)-(8) of this paragraph, as well as the information required by this subparagraph, in support of the application for a construction permit.

(2) A summary description and discussion of the facility, with special attention to design and operating characteristics, unusual or novel design features, and principal safety considerations.

(3) The preliminary design of the facility, including:

(i) The principal design criteria for the facility;<sup>2</sup> Appendix A, General Design Criteria for Nuclear Power Plants, establishes minimum requirements for the

<sup>1</sup> Amended 42 FR 22882.

<sup>2</sup> The applicant may provide information required by this paragraph in the form of a discussion, with specific references, of similarities to and differences from, facilities of similar design for which applications have previously been filed with the Commission.

<sup>3</sup> General design criteria for chemical processing facilities are being developed.

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§ 50.45 *Standards for construction permits.* An applicant for a license or an amendment of a license who proposes to construct or alter a production or utilization facility will be initially granted a construction permit, if the application is in conformity with and acceptable under the criteria of §§ 50.31 through 50.38 and the standards of §§ 50.40 through 50.43.

### § 50.46 *Acceptance Criteria for Emergency Core Cooling Systems for Light Water Nuclear Power Reactors.*

(a) (1) Except as provided in paragraph (a) (2) and (3) of this section, each boiling and pressurized light-water nuclear power reactor fueled with uranium oxide pellets within cylindrical Zircaloy cladding shall be provided with an emergency core cooling system (ECCS) which shall be designed such that its calculated cooling performance following postulated loss-of-coolant accidents conforms to the criteria set forth in paragraph (b) of this section. ECCS cooling performance shall be calculated in accordance with an acceptable evaluation model, and shall be calculated for a number of postulated loss-of-coolant accidents of different sizes, locations, and other properties sufficient to provide assurance that the entire spectrum of postulated loss-of-coolant accidents is covered. Appendix K, ECCS Evaluation Models, sets forth certain required and acceptable features of evaluation models. Conformance with the criteria set forth in paragraph (b) of this section with ECCS cooling performance calculated in accordance with an acceptable evaluation model, may require that restrictions be imposed on reactor operation.

(2) With respect to reactors for which operating licenses have previously been issued and for which operating licenses may be issued on or before December 28, 1974:

(i) The time within which actions required or permitted under this subparagraph (2) must occur shall begin to run on February 4, 1974.

(ii) Within six months following the date specified in paragraph (a) (2) (i) of this section an evaluation in accordance with paragraph (a) (1) of this section shall have been submitted to the Director of Regulation of the Atomic Energy Commission. The evaluation shall have been accompanied by such proposed changes in technical specifications or license amendments as may be necessary to bring reactor operation in conformity with paragraph (a) (1) of this section.

(iii) Any licensee may have requested an extension of the six-month period referred to in paragraph (a) (2) (i) of this section for good cause. Any such request shall have been submitted not less than 45 days prior to expiration of the six-

month period, and shall have been accompanied by affidavits showing precisely why the evaluation is not complete and the minimum time believed necessary to complete it. The Director of Regulation of the Atomic Energy Commission shall have caused notice of such a request to be published promptly in the FEDERAL REGISTER; such notice shall have provided for the submission of comments by interested persons within a time period established by the Director of Regulation. If, upon reviewing the foregoing submissions, the Director of Regulation concluded that good cause had been shown for an extension, he may have extended the six-month period for the shortest additional time which in his judgment will be necessary to enable the licensee to furnish the submissions required by paragraph (a) (2) (ii) of this section. Requests for extensions of the six-month period submitted under this subparagraph will have been ruled upon by the Director of Regulation prior to expiration of that period.

(iv) Upon submission of the evaluation required by paragraph (a) (2) (ii) of this section (or under paragraph (a) (2) (iii), if the six-month period is extended) the facility shall continue or commence operation only within the limits of both the proposed technical specifications or license amendments submitted in accordance with this paragraph (a) (2) and all technical specifications or license conditions previously imposed by the Atomic Energy Commission, including the requirements of the Interim Policy Statement (June 29, 1971, 36 FR 12248) as amended December 18, 1971, 36 FR 24082).

(v) Further restrictions on reactor operation will be imposed if it is found that the evaluations submitted under paragraphs (a) (2) (ii) and (iii) of this section are not consistent with paragraph (a) (1) of this section and as a result such restrictions are required to protect the public health and safety.

(vi) Exemptions from the operating requirements of paragraph (a) (2) (iv) of this section may be granted for good cause. Requests for such exemption shall be submitted not less than 45 days prior to the date upon which the plant would otherwise be required to operate in accordance with the procedures of said paragraph (a) (2) (iv) of this section. Any such request shall be filed with the Secretary of the Commission, who shall cause notice of its receipt to be published promptly in the FEDERAL REGISTER; such notice shall provide for the submission of comments by interested persons within 14 days following FEDERAL REGISTER publication. The Director of Nuclear Reactor Regulation shall submit his views as to any requested exemption within five days following expiration of the comment period.

(vii) Any request for an exemption submitted under subparagraph (vi) of this subparagraph (2) must show, with appropriate affidavits and technical submissions, that it would be in the public interest to allow the licensee a

specified additional period of time within which to alter the operation of the facility in the manner required by subparagraph (iv) of this subparagraph (2). The request shall also include a discussion of the alternatives available for establishing compliance with the rule.

(3) Construction permits may have been issued after December 28, 1973 but before December 28, 1974 subject to any applicable conditions or restrictions imposed pursuant to other regulations in this chapter and the Interim Acceptance Criteria for Emergency Core Cooling Systems published on June 29, 1971 (36 FR 12248) as amended (December 18, 1971, 36 FR 24082): Provided, however, that no operating license shall be issued for facilities constructed in accordance with construction permits issued pursuant to this paragraph, unless the Commission determines, among other things that the proposed facility meets the requirements of paragraph (a) (1) of this section.

(b) (1) *Peak cladding temperature.* The calculated maximum fuel element cladding temperature shall not exceed 2200° F.

(2) *Maximum cladding oxidation.* The calculated total oxidation of the cladding shall nowhere exceed 0.17 times the total cladding thickness before oxidation. As used in this subparagraph total oxidation means the total thickness of cladding metal that would be locally converted to oxide if all the oxygen absorbed by and reacted with the cladding locally were converted to stoichiometric zirconium dioxide. If cladding rupture is calculated to occur, the inside surfaces of the cladding shall be included in the oxidation, beginning at the calculated time of rupture. Cladding thickness before oxidation means the radial distance from inside to outside the cladding, after any calculated rupture or swelling has occurred but before significant oxidation. Where the calculated conditions of transient pressure and temperature lead to a prediction of cladding swelling, with or without cladding rupture, the unoxidized cladding thickness shall be defined as the cladding cross-sectional area, taken at a horizontal plane at the elevation of the rupture, if it occurs, or at the elevation of the highest cladding temperature if no rupture is calculated to occur, divided by the average circumference at that elevation. For ruptured cladding the circumference does not include the rupture opening.

(3) *Maximum hydrogen generation.* The calculated total amount of hydrogen generated from the chemical reaction of the cladding with water or steam shall not exceed 0.01 times the hypothetical amount that would be generated if all of the metal in the cladding cylinders surrounding the fuel, excluding the cladding surrounding the plenum volume, were to react.

(4) *Coolable geometry.* Calculated changes in core geometry shall be such that the core remains amenable to cooling.

(5) *Long-term cooling.* After any calculated successful initial operation of the ECCS, the calculated core temperature shall be maintained at an accept-

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ably low value and decay heat shall be removed for the extended period of time required by the long-lived radioactivity remaining in the core.

(c) As used in this section:

(1) Loss-of-coolant accidents (LOCA's) are hypothetical accidents that would result from the loss of reactor coolant, at a rate in excess of the capability of the reactor coolant makeup system, from breaks in pipes in the reactor coolant pressure boundary up to and including a break equivalent in size to the double-ended rupture of the largest pipe in the reactor coolant system.

(2) An evaluation model is the calculational framework for evaluating the behavior of the reactor system during a postulated loss-of-coolant accident (LOCA). It includes one or more computer programs and all other information necessary for application of the calculational framework to a specific LOCA, such as mathematical models used, assumptions included in the programs, procedure for treating the program input and output information, specification of those portions of analysis not included in computer programs, values of parameters, and all other information necessary to specify the calculational procedure.

(d) The requirements of this section are in addition to any other requirements applicable to ECCS set forth in this Part. The criteria set forth in paragraph (b), with cooling performance calculated in accordance with an acceptable evaluation model, are in implementation of the general requirements with respect to ECCS cooling performance design set forth in this Part, including in particular Criterion 35 of Appendix A.

### § 50.47 Emergency plans.

(a)(1) No operating license for a nuclear power reactor will be issued unless a finding is made by NRC that the state of onsite and offsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

(2) The NRC will base its finding on a review of the Federal Emergency Management Agency (FEMA) findings and determinations as to whether State and local emergency plans are adequate and capable of being implemented, and on the NRC assessment as to whether the applicant's onsite emergency plans are adequate and capable of being implemented. In any NRC licensing proceeding, a FEMA finding will constitute a rebuttable presumption on a question of adequacy.

(b) The onsite and offsite emergency response plans for nuclear power reactors must meet the following standards:<sup>1</sup>

(1) Primary responsibilities for

<sup>1</sup> These standards are addressed by specific criteria in NUREC-0654: FEMA-REP-1 entitled "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants—For Interim Use and Comment" January 1980.

emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

(2) On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.

(3) Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned response have been identified.

(4) A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

(5) Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and followup messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

(6) Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.

(7) Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.

(8) Adequate emergency facilities and

equipment to support the emergency response are provided and maintained.

(9) Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

(10) A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.

(11) Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.

(12) Arrangements are made for medical services for contaminated injured individuals.

(13) General plans for recovery and reentry are developed.

(14) Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.

(15) Radiological emergency response training is provided to those who may be called on to assist in an emergency.

(16) Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.

(c)(1) Failure to meet the standards set forth in paragraph (b) of this subsection may result in the Commission declining to issue an Operating License; however, the applicant will have an opportunity to demonstrate to the satisfaction of the Commission that deficiencies in the plans are not significant for the plant in question, that adequate interim compensating actions have been or will be taken promptly, or that there are other compelling reasons to permit plant operation.

(2) Generally, the plume exposure pathway EPZ for nuclear power plants shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 km) in radius. The exact size and configuration of the EPZs surrounding a particular nuclear power reactor shall be determined in relation to local emergency response needs and capabilities as they are affected by such



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conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gas-cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway shall focus on such actions as are appropriate to protect the food ingestion pathway.

### § 50.52 Combining licenses.

The Commission may combine in a single license the activities of an applicant which would otherwise be licensed severally.

### § 50.53 Jurisdictional limitations.

No license under this part shall be deemed to have been issued for activities which are not under or within the jurisdiction of the United States.†

### § 50.54 Conditions of licenses.

Whether stated therein or not, the following shall be deemed conditions in every license issued:

(a) [Deleted 32 FR 2562.]

(b) No right to the special nuclear material shall be conferred by the license except as may be defined by the license.

(c) Neither the license, nor any right thereunder, nor any right to utilize or produce special nuclear material shall be transferred, assigned, or disposed of in any manner, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission shall, after securing full information, find that the transfer is in accordance with the provisions of the act and give its consent in writing.

(d) The license shall be subject to suspension and to the rights of recapture of the material or control of the facility reserved to the Commission under section 108 of the act in a state of war or national emergency declared by Congress.

(e) The license shall be subject to revocation, suspension, modification, or amendment for cause as provided in the act and regulations, in accordance with the procedures provided by the act and regulations.

(f) The licensee will at any time before expiration of the license, upon request of the Commission submit written statements, signed under oath or affirmation, to enable the Commission to determine whether or not the license should be modified, suspended or revoked.

(g) The issuance or existence of the license shall not be deemed to waive, or relieve the licensee from compliance with, the antitrust laws, as specified in subsection 105a of the act. In the event that the licensee should be found by a court of competent jurisdiction to have violated any provision of such antitrust laws in the conduct of the licensed activity, the Commission may suspend or revoke the license or take such other action with respect to it as shall be deemed necessary.

(h) The license shall be subject to the provisions of the act now or hereafter in effect and to all rules, regulations, and orders of the Commission. The terms and conditions of the license shall be subject to amendment, revision, or modification, by reason of amendments of the act or by reason of rules, regulations,

and orders issued in accordance with the terms of the act.

(i) Except as provided in § 55.9 of this chapter, the licensee shall not permit the manipulation of the controls of any facility by anyone who is not a licensed operator or senior operator as provided in Part 55 of this chapter.

(1-1) Within three (3) months after issuance of an operating license, the licensee shall have in effect an operator requalification program which shall, as a minimum, meet the requirements of Appendix A of Part 55 of this Chapter. Notwithstanding the provisions of § 50.59 the licensee shall not, except as specifically authorized by the Commission, make a change in an approved operator requalification program by which the scope, time allotted for the program or frequency in conducting different parts of the program is decreased.

Holders of operating licenses in effect on September 17, 1973 shall implement an operator requalification program which, as a minimum, meets the requirements of Appendix A of Part 55 of this chapter which was submitted for approval by the Atomic Energy Commission.

(j) Apparatus and mechanisms other than controls, the operation of which may affect the reactivity or power level of a reactor shall be manipulated only with the knowledge and consent of an operator or senior operator licensed pursuant to Part 55 of this chapter present at the controls.

(k) An operator or senior operator licensed pursuant to Part 55 of this chapter shall be present at the controls at all times during the operation of the facility.

(l) The licensee shall designate individuals to be responsible for directing the licensed activities of licensed operators. These individuals shall be licensed as senior operators pursuant to Part 55 of this chapter.

(m) A senior operator licensed pursuant to Part 55 of this chapter shall be present at the facility or readily available on call at all times during its operation, and shall be present at the facility during initial start-up and approach to power, recovery from an unplanned or unscheduled shut-down or significant reduction in power, and refueling, or as otherwise prescribed in the facility license.

\*\*\* (n) The licensee shall not, except as authorized pursuant to a construction permit, make any alteration in the facility constituting a change from the technical specifications previously incorporated in a license or construction permit pursuant to § 50.36.

(o) Primary reactor containments for water cooled power reactors shall be subject to the requirements set forth in Appendix J.

## ISSUANCE, LIMITATIONS, AND CONDITIONS OF LICENSES AND CONSTRUCTION PERMITS

### § 50.50 Issuance of licenses and construction permits.

Upon determination that an application for a license meets the standards and requirements of the act and regulations, and that notifications, if any, to other agencies or bodies have been duly made, the Commission will issue a license, or if appropriate a construction permit, in such form and containing such conditions and limitations including technical specifications, as it deems appropriate and necessary.

### § 50.51 Duration of license, renewal.

Each license will be issued for a fixed period of time to be specified in the license but in no case to exceed 40 years from the date of issuance. Where the operation of a facility is involved the Commission will issue the license for the term requested by the applicant or for the estimated useful life of the facility if the Commission determines that the estimated useful life is less than the term requested. Where construction of a facility is involved, the Commission may specify in the construction permit the period for which the license will be issued if approved pursuant to § 50.56. Licenses may be renewed by the Commission upon the expiration of the period.

†Amended 43 FR 6915.

\*\* Amended 38 FR 26354.

\*\*\*Revised 31 FR 3668.

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(p) The licensee shall prepare and maintain safeguards contingency plan Procedures in accordance with Appendix C of 10 CFR Part 73 for effecting the actions and decisions contained in the Responsibility Matrix of the safeguards contingency plan. The licensee may make no change which would decrease the effectiveness of a security plan prepared pursuant to § 50.34(c) or Part 73 of this chapter, or of the first four categories of information (Background, Generic Planning Base, Licensee Planning Base, Responsibility Matrix) contained in a licensee safeguards contingency plan prepared pursuant to § 50.34(d) or Part 73, as applicable, without prior approval of the Commission. A licensee desiring to make such a change shall submit an application for an amendment to his license pursuant to § 50.90. The licensee may make changes to the security plan or to the safeguards contingency plan without prior Commission approval if the changes do not decrease the safeguards effectiveness of the plan. The licensee shall maintain records of changes to the plans made without prior Commission approval for a period of two years from the date of the change, and shall furnish to the Director of Nuclear Material Safety and Safeguards (for enrichment and reprocessing facilities) or to the Director of Nuclear Reactor Regulation (for nuclear reactors), U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the appropriate NRC Regional Office specified in Appendix A of Part 73 of this chapter, a report containing a description of each change within two months after the change is made. Prior to the safeguards contingency plan being put into effect, the licensee shall have:

- (1) All safeguards capabilities specified in the safeguards contingency plan available and functional,
- (2) Detailed Procedures developed according to Appendix C to Part 73 available at the licensee's site, and
- (3) All appropriate personnel trained to respond to safeguards incidents as outlined in the plan and specified in the detailed Procedures.

The licensee shall provide for the development, revision, implementation, and maintenance of his safeguards contingency plan. To this end, the licensee shall provide for a review at least every 12 months of the safeguards contingency plan by individuals independent of both security program management and personnel who have direct responsibility for implementation of the security program. The review shall include a review and audit of safeguards contingency procedures and practices, an audit of the security system testing and maintenance program, and a test of the safeguards system along with commitments established for response by local law enforcement authorities. The results of the review and audit, along with recommendations for improvements, shall be documented, reported to the licensee's

corporate and plant management, and kept available at the plant for inspection for a period of two years.

➤ (q) A licensee authorized to possess and/or operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in § 50.47(b) and the requirements in Appendix E of this Part. A licensee authorized to possess and/or operate a research reactor or a fuel facility shall follow and maintain in effect emergency plans which meet the requirements in Appendix E of this Part. The nuclear power reactor licensee may make changes to these plans without Commission approval only if such changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of § 50.47(b) and the requirements of Appendix E of this Part. The research reactor licensee and/or the fuel facility licensee may make changes to these plans without Commission approval only if such changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the requirements of Appendix E of this Part. Proposed changes that decrease the effectiveness of the approved emergency plans shall not be implemented without application to and approval by the Commission. The licensee shall furnish 3 copies of each proposed change for approval; and/or if a change is made without prior approval, 3 copies shall be submitted within 30 days after the change is made or proposed to the Director of the appropriate NRC regional office specified in Appendix D, 10 CFR Part 20, with 10 copies to the Director of Nuclear Reactor Regulation, or, if appropriate, the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

(r) Each licensee who is authorized to possess and/or operate a research or test reactor facility with an authorized power level greater than or equal to 500 kW thermal, under a license of the type specified in § 50.21(c), shall submit emergency plans complying with 10 CFR Part 50, Appendix E, to the Director of Nuclear Reactor Regulation for approval within one year from the effective date of this rule. Each licensee who is authorized to possess and/or operate a research reactor facility with an authorized power level less than 500 kW thermal, under a license of the type specified in § 50.21(c), shall submit emergency plans complying with 10 CFR Part 50, Appendix E, to the Director of Nuclear Reactor Regulation for approval within two years from the effective date of this amendment.

(s)(1) Each licensee who is authorized to possess and/or operate a nuclear power reactor shall submit to NRC

within 60 days of the effective date of this amendment the radiological emergency response plans of State and local governmental entities in the United States that are wholly or partially within a plume exposure pathway EPZ, as well as the plans of State governments wholly or partially within an ingestion pathway EPZ.<sup>1,2</sup> Ten (10) copies of the above plans shall be forwarded to the Director of Nuclear Reactor Regulation with 3 copies to the Director of the appropriate NRC regional office. Generally, the plume exposure pathway EPZ for nuclear power reactors shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 km) in radius. The exact size and configuration of the EPZs for a particular nuclear power reactor shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gas-cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway EPZ shall focus on such actions as are appropriate to protect the food ingestion pathway.

(2) For operating power reactors, the licensee, State, and local emergency response plans shall be implemented by April 1, 1981, except as provided in Section IV.D.3 of Appendix E of this Part. If after April 1, 1981, the NRC finds that the state of emergency preparedness does not provide reasonable assurance that appropriate protective measures can and will be taken in the event of a radiological emergency and if the deficiencies are not corrected within four months of that finding, the Commission will determine whether the reactor shall be shut down until such deficiencies are remedied or whether other enforcement action is appropriate. In determining whether a shutdown or other enforcement action is appropriate, the Commission shall take into account, among other factors, whether the licensee can demonstrate to the Commission's satisfaction that the deficiencies in the plan are not

<sup>1</sup> Emergency Planning Zones (EPZs) are discussed in NUREG-0396: EPA 520/1-78-016, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants," December 1978.

<sup>2</sup> If the State and local emergency response plans have been previously provided to the NRC for inclusion in the facility docket, the applicant need only provide the appropriate reference to meet this requirement.



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significant for the plant in question, or that adequate interim compensating actions have been or will be taken promptly, or that there are other compelling reasons for continued operation.

(3) The NRC will base its finding on a review of the FEMA findings and determinations as to whether State and local emergency plans are adequate and capable of being implemented, and on the NRC assessment as to whether the licensee's emergency plans are adequate and capable of being implemented. Nothing in this paragraph shall be construed as limiting the authority of the Commission to take action under any other regulation or authority of the Commission or at any time other than that specified in this paragraph.

(t) A nuclear power reactor licensee shall provide for the development, revision, implementation, and maintenance of its emergency preparedness program. To this end, the licensee shall provide for a review of its emergency preparedness program at least every 12 months by persons who have no direct responsibility for implementation of the emergency preparedness program. The review shall include an evaluation for adequacy of interfaces with State and local governments and of licensee drills, exercises, capabilities, and procedures. The results of the review, along with recommendations for improvements, shall be documented, reported to the licensee's corporate and plant management, and retained for a period of five years. The part of the review involving the evaluation for adequacy of interface with State and local governments shall be available to the appropriate State and local governments.

(u) Within 60 days after the effective date of this amendment, each nuclear power reactor licensee shall submit to the NRC plans for coping with emergencies that meet standards in § 50.47(b) and the requirements of Appendix E of this Part.

### § 50.55 Conditions of construction permits.

Each construction permit shall be subject to the following terms and conditions:

(a) The permit shall state the earliest and latest dates for completion of the construction or modification.

†

(b) If the proposed construction or modification of the facility is not completed by the latest completion date, the permit shall expire and all rights thereunder shall be forfeited: *Provided, however*, That upon good cause shown the Commission will extend the completion date for a reasonable period of time. The Commission will recognize, among other things, developmental problems attributable to the experimental nature of the facility or fire, flood, explosion, strike, sabotage, domestic violence, enemy action, an act of the elements, and other acts beyond the control of the permit holder, as a basis for extending the completion date.

(c) Except as modified by this section and § 50.55a, the construction permit shall be subject to the same conditions to which a license is subject.

(d) At or about the time of completion of the construction or modification of the facility, the applicant will file any additional information needed to bring the original application for license up to date, and will file an application for an operating license or an amendment to an application for a license to construct and operate the facility for the issuance of an operating license, as appropriate, as specified in § 50.30(d).

(e) (1) If the permit is for construction of a nuclear power plant, the holder of the permit shall notify the Commission of each deficiency found in design and construction, which, were it to have remained uncorrected, could have affected adversely the safety of operations of the nuclear power plant at any time throughout the expected lifetime of the plant, and which represents:

(i) A significant breakdown in any portion of the quality assurance program conducted in accordance with the requirements of Appendix B; or

(ii) A significant deficiency in final design as approved and released for construction such that the design does not conform to the criteria and bases stated in the safety analysis report or construction permit; or

(iii) A significant deficiency in construction of or significant damage to a structure, system, or component which will require extensive evaluation, exten-

sive redesign, or extensive repair to meet the criteria and bases stated in the safety analysis report or construction permit or to otherwise establish the adequacy of the structure, system, or component to perform its intended safety function; or

(iv) A significant deviation from performance specifications which will require extensive evaluation, extensive redesign, or extensive repair to establish the adequacy of a structure, system, or component to meet the criteria and bases stated in the safety analysis report or construction permit or to otherwise establish the adequacy of the structure, system, or component to perform its intended safety function.

(2) The holder of a construction permit shall within 24 hours<sup>†</sup> notify the appropriate Nuclear Regulatory Commission Inspection and Enforcement Regional Office of each reportable deficiency.

(3) The holder of a construction permit shall also submit a written report on a reportable deficiency within thirty (30) days to the appropriate NRC Regional Office shown in Appendix D of Part 20 of this chapter. Copies of such report shall be sent to the Director of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

The report shall include a description of the deficiency, an analysis of the safety implications and the corrective action taken, and sufficient information to permit analysis and evaluation of the deficiency and of the corrective action. If sufficient information is not available for a definitive report to be submitted within 30 days, an interim report containing all available information shall be filed, together with a statement as to when a complete report will be filed.

(4) Remedial action may be taken both prior to and after notification of the Division of Inspection and Enforcement, subject to the risk of subsequent disapproval of such action by the Commission.

### § 50.55a Codes and Standards.

Each operating license for a boiling or pressurized water-cooled nuclear power facility shall be subject to the conditions in paragraph (g) and each construction permit for a utilization facility shall be subject to the following conditions in addition to those specified in § 50.55.

\*(a)(1) Structures, systems, and components shall be designed, fabricated, erected, constructed, tested, and inspected to quality standards commensurate with the importance of the safety function to be performed.

† Deleted 42 FR 43385.

† Amended 41 FR 16445.

\* Redesignated 37 FR 17021.

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38 FR 19012  
38 FR 11423  
36 FR 57911  
44 FR 57912

(2) As a minimum, the systems and components of boiling and pressurized water-cooled nuclear power reactors specified in paragraphs (c), (d), (e), (f), (g), and (i) of this section shall meet the requirements described in those paragraphs, except that the American Society of Mechanical Engineers (hereinafter referred to as ASME) Code N-symbols need not be applied, and the protection systems of nuclear power reactors of all types shall meet the requirements described in paragraph (h) of this section, except as authorized by the Commission or the Atomic Energy Commission upon demonstration by the applicant for or holder of a construction permit that:

(i) Design, fabrication, installation, testing, or inspection of the specified system or component, is to the maximum extent practical, in accordance with generally recognized codes and standards, and compliance with the requirements described in paragraphs (c) through (i) of this section or portions thereof would result in hardships or unusual difficulties without a compensating increase in the level of quality and safety; or

\*(ii) Proposed alternatives to the described requirements or portions thereof will provide an acceptable level of quality and safety. For example, the use of inspection or survey systems other than those required by the specified ASME Codes and Addenda may be authorized under this subparagraph provided that an acceptable level of quality and safety in design, fabrication, installation, and testing is achieved.

(b) (1) As used in this section, references<sup>1</sup> to Section III of the ASME Boiler and Pressure Vessel Code refer to Section III, Division 1, and include editions through the 1977 Edition and addenda through the Summer<sup>\*\*</sup> 1978 Addenda.

(b)(2) As used in this section, references<sup>1</sup> to Section XI of the ASME Boiler and Pressure Vessel Code refer to Section XI, Division 1 and include editions through the 1977 Edition and addenda through the Summer 1978 Addenda, subject to the following limitations and modifications:

(i) *Applicability of specific editions and addenda.* When applying the 1974 Edition only the addenda through the Summer 1975 Addenda may be used. When applying the 1977 Edition all of the addenda through the Summer 1978 Addenda must also be used.

(ii) *Pressure-retaining welds in ASME Code Class 1 piping (applies to Table IWB-2500 and IWB-2500-1 and Category B-J).* If the facility's

<sup>1</sup>These incorporation by reference provisions were approved by the Director of the Federal Register on March 17, 1972, May 4, 1973, and February 7, 1978.

\*Redesignated 37 FR 17021.

\*\* Amended 44 FR 57911.

See page 50-14 for footnotes 2-5.

application for a construction permit was docketed prior to July 1, 1978, the extent of examination for Code Class 1 pipe welds may be determined by the requirements of Table IWB-2500 and Table IWB-2600 Category B-J of Section XI of the ASME Code in the 1974 Edition and addenda through the Summer 1975 Addenda or other requirements the Commission may adopt.

(iii) *Steam generator tubing (modifies Article IWB-2000).* If the technical specifications of a nuclear power plant include surveillance requirements for steam generators different than those in Article IWB-2000, the inservice inspection program for steam generator tubing shall be governed by the requirements in the technical specifications.

(iv) *Pressure-retaining welds in ASME Code Class 2 piping (applies to Tables IWC-2520 or IWC-2520-1, Category C-F).* (A) Appropriate Code Class 2 pipe welds in Residual Heat Removal Systems, Emergency Core Cooling Systems, and Containment Heat Removal Systems, shall be examined. The extent of examination for these systems shall be determined by the requirements of paragraph IWC-1220, Table IWC-2520 Category C-F and C-G, and paragraph IWC-2411 in the 1974 Edition and Addenda through the Summer 1975 Addenda of Section XI of the ASME Code.

(B) For a nuclear power plant whose application for a construction permit is docketed prior to July 1, 1978, the extent of examination for Code Class 2 pipe welds may be determined by the requirements of paragraph IWC-1220, Table IWC-2520 Category C-F and C-G and paragraph IWC-2411 in the 1974 Edition and Addenda through the Summer 1975 Addenda of Section XI of the ASME Code or other requirements the Commission may adopt.

(c) Pressure vessels:

(1) For construction permits issued before January 1, 1971, for reactors not licensed for operation, pressure vessels which are part of the reactor coolant pressure boundary<sup>2</sup> shall meet the requirements for Class A vessels set forth in section III of the ASME Boiler and Pressure Vessel Code, applicable Code Cases, and Addenda<sup>3</sup> in effect<sup>4</sup> on the date of order<sup>5</sup> of the vessel. The pressure vessels may meet the requirements set forth in editions of this Code, applicable Code Cases, and Addenda which have become effective after the date of vessel order.

(2) For construction permits issued on or after January 1, 1971, but before July 1, 1974,<sup>\*\*\*</sup> pressure vessels which are part of the reactor coolant pressure boundary<sup>2</sup> shall meet the requirements for Class A or Class 1 vessels set forth in editions of section III of the ASME Boiler and Pressure Vessel Code and Addenda<sup>3</sup> in effect<sup>4</sup> on the date of order<sup>5</sup> of the pressure vessel: *Provided, however,* That if the pressure vessel is ordered more than 18 months prior to the date of issuance of the construction permit, compliance with the requirements for Class A or Class 1 vessels set forth in editions of section III of the ASME Boiler and Pressure Vessel Code and Addenda in effect 18 months prior to the date of issuance of the construction permit is required. The pressure vessels may meet the requirements set forth in editions of this Code and Addenda which have become effective after the date of vessel order or after 18 months prior to the date of issuance of the construction permit.

<sup>\*\*\*</sup>Amended 41 FR 6256.

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mum, identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted. Records shall be identifiable and retrievable. Consistent with applicable regulatory requirements, the applicant shall establish requirements concerning record retention, such as duration, location, and assigned responsibility.

### VIII. AUDITS

A comprehensive system of planned and periodic audits shall be carried out to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. The audits shall be performed in accordance with the written procedures or check lists by appropriately trained personnel not having direct responsibilities in the areas being audited. Audit results shall be documented and reviewed by management having responsibility in the area audited. Followup action, including re-audit of deficient areas, shall be taken where indicated.

### APPENDIX C—A GUIDE FOR THE FINANCIAL DATA AND RELATED INFORMATION REQUIRED TO ESTABLISH FINANCIAL QUALIFICATIONS FOR FACILITY CONSTRUCTION PERMITS AND OPERATING LICENSES

#### GENERAL INFORMATION

This appendix is intended to apprise applicants for licenses to construct and operate production or utilization facilities of the types described in § 50.21(b) or § 50.22, or a testing facility, of the general kinds of financial data and other related information that will demonstrate the financial qualifications of the applicant to carry out the activities for which the permit or license is sought. The kind and depth of information described in this guide is not intended to be a rigid and absolute requirement. In some instances, additional pertinent material may be needed. In any case, the applicant should include information other than that specified if such information is pertinent to establishing the applicant's financial ability to construct and operate the proposed facility.

Since separate findings of financial qualifications will be made by the Commission at the construction permit stage of the licensing process and at the operating license stage, the nature of the information to be included in the application at each of these stages is discussed separately.

It is important to observe also that both § 50.33(f) and this appendix distinguished between applicants which are established organizations and those which are newly formed entities organized primarily for the purpose of engaging in the activity for which the permit or license is sought. Those in the former category will normally have a history of operating experience and be able to submit financial statements reflecting the financial results of past operations. With respect, however, to the applicant which is a newly formed company established primarily for the purpose of carrying out the licensed activity, with little or no prior operating history, somewhat more detailed data and supporting documentation will generally be necessary. For this reason, the appendix describes separately the scope of information to be included in applications by each of these two classes of applicants.

In determining an applicant's financial qualifications, the Commission will require the minimum amount of information necessary for that purpose. No special forms are prescribed for submitting the information. In many cases, the financial information usually contained in current annual financial reports, including summary data of prior years, will be sufficient for the Commission's needs. The Commission reserves the right, however, to require additional financial information at the construction permit stage, at the operating license stage, and during operation of the facility, particularly in cases in which the proposed power generating facility will be commonly owned by two or more existing companies or in which financing depends upon long-term arrangements for the sharing of the power from the facility by two or more electrical generating companies.

Applicants, permit holders, and licensees are encouraged to consult with the Commission with respect to any questions they may have relating to the requirements of the Commission's regulations or the information set forth in this appendix.

#### I. APPLICANTS WHICH ARE ESTABLISHED ORGANIZATIONS

##### A. Applications for construction permits—

1. *Estimate of construction costs.* For electric utilities, each applicant's estimate of the total cost of the proposed facility should be broken down as follows and be accompanied by a statement describing the bases from which the estimate is derived:

(a) Total nuclear production plant costs .....

(b) Transmission, distribution, and general plant costs .....

(c) Nuclear fuel inventory cost for first core .....

Total estimated cost .....

If the fuel is to be acquired by lease or other arrangement than purchase, the application should so state. The items to be included in these categories should be the same as those defined in the applicable electric plant and nuclear fuel inventory accounts prescribed by the Federal Power Commission or an explanation given as to any departures therefrom.

Since the composition of construction cost estimates for production and utilization facilities other than nuclear power reactors will vary according to the type of facility, no particular format is suggested for submitting such estimates. The estimate should, however, be itemized by categories of cost in sufficient detail to permit an evaluation of its reasonableness.

2. *Source of construction funds.* The application should include a brief statement of the applicant's general financial plan for financing the cost of the facility, identifying the source or sources upon which the applicant relies for the necessary construction funds, e.g., internal sources such as undistributed earnings and depreciation accruals, or external sources such as borrowings.

3. *Applicant's financial statements.* The application should also include the applicant's latest published annual financial report, together with such current interim financial statements as are pertinent. If such report is not published, the balance sheet and operating statement covering the latest complete accounting year together with all pertinent notes thereto and certification by a public accountant should be furnished.

B. *Applications for operating licenses.* An application for a facility operating license will usually be filed near the time of completion of construction of the facility. Section 50.33(f) requires that all applications for operating licenses show that the applicant possesses the funds necessary to cover estimated operating costs, or has reasonable assurance of obtaining the necessary funds, or a combination of the two. In addition, each application for a license for a facility other than a medical or research reactor is required to show that the applicant possesses or has reasonable assurance of obtaining the funds necessary to pay the estimated costs of operation for the period of the license or for 5 years, whichever is greater, plus the estimated costs of permanently shutting down the facility and maintaining it in a safe condition. For purposes of the latter requirement, it will ordinarily be sufficient to show at the time of filing of the application, availability of resources sufficient to cover estimated operating costs for each of the first 5 years of operation plus the estimated costs of permanent shutdown and maintenance of the facility in safe condition. It is also expected that, in most cases, the applicant's annual financial statements contained in its published annual reports will enable the Commission to evaluate the applicant's financial capability to satisfy this requirement.

#### II. APPLICANTS WHICH ARE NEWLY FORMED ENTITIES

A. *Applications for construction permits—*

1. *Estimate of construction costs.* The information that will normally be required of applicants which are newly formed entities will not differ in scope from that required of established organizations. Accordingly, applicants should submit estimates as de-

<sup>1</sup> Section 2.790 of 10 CFR Part 2 and § 9.5 of 10 CFR Part 9 indicate the circumstances under which information submitted by applicants may be withheld from public disclosure.



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[Deleted 39 FR 26279.]

scribed above for established organizations.

2. *Source of construction funds.* The application should specifically identify the source or sources upon which the applicant relies for the funds necessary to pay the cost of constructing the facility, and the amount to be obtained from each. With respect to each source, the application should describe in detail the applicant's legal and financial relationships with its stockholders, corporate affiliates, or others (such as financial institutions) upon which the applicant is relying for financial assistance. If the sources of funds relied upon include parent companies or other corporate affiliates, information to support the financial capability of each such company or affiliate to meet its commitments to the applicant should be set forth in the application. This information should be of the same kind and scope as would be required if the parent companies or affiliates were in fact the applicant. Ordinarily, it will be necessary that copies of agreements or contracts among the companies be submitted.

As noted earlier in this appendix, an applicant which is a newly formed entity will normally not be in a position to submit the usual types of balance sheets and income statements reflecting the results of prior operations. The applicant should, however, include in its application a statement of its assets, liabilities, and capital structure as of the date of the application.

B. *Applications for operating licenses—1. Current financial statements.* In its application for a license to operate the facility, the applicant should include a statement of its current financial condition.

2. *Estimates of operating income and expense.* In order to enable the Commission to evaluate the applicant's financial qualifications to operate the completed facility and, if necessary, to shut it down, as required by § 50.33(f), the application for a license to operate a facility other than a medical or research reactor should include a statement of the applicant's estimate of annual income and expense for the first 5 years of operation. The statement should list operating revenues and expense in sufficient detail to permit an assessment of the reasonableness of the estimates. In addition, the applicant should include its estimate of costs to permanently shut down the facility and maintain it in safe condition if that should become necessary.

#### III. ANNUAL FINANCIAL STATEMENTS

Each licensee and each holder of a construction permit for a production or utilization facility of a type described in § 50.21(b) or § 50.22, or a testing facility is required by § 50.71(b) to file its annual financial report with the Commission at the time of issuance thereof. This requirement does not apply to licensees or holders of construction permits for medical and research reactors.

#### IV. ADDITIONAL INFORMATION

The Commission may, from time to time, request the applicant or licensee, whether an established organization or newly formed entity, to submit additional or more detailed information respecting its financial arrangements and status of funds if such information is deemed necessary to enable the Commission to determine an applicant's financial qualifications for the license or a licensee's financial qualifications to continue the conduct of the activities authorized by the license and to shut down the facility and maintain it in safe condition.

### Appendix E—Emergency Planning and Preparedness for Production and Utilization Facilities<sup>1</sup>

#### Table of Contents

- I. Introduction
- II. The Preliminary Safety Analysis Report
- III. The Final Safety Analysis Report
- IV. Content of Emergency Plans
- V. Implementing Procedures

#### I. Introduction

Each applicant for a construction permit is required by § 50.34(a) to include in the preliminary safety analysis report a discussion of preliminary plans for coping with emergencies. Each applicant for an operating license is required by § 50.34(b) to include in the final safety analysis report plans for coping with emergencies.

This appendix establishes minimum requirements for emergency plans for use in attaining an acceptable state of emergency preparedness. These plans shall be described generally in the preliminary safety analysis report and submitted as a part of the final safety analysis report.

The potential radiological hazards to the public associated with the operation of research and test reactors and fuel facilities licensed under 10 CFR Parts 50 and 70 involve considerations different than those associated with nuclear power reactors. Consequently, the size of Emergency Planning Zones<sup>2</sup> (EPZs) for facilities other

<sup>1</sup> NRC staff has developed two regulatory guides: 2.6, "Emergency Planning for Research Reactors," and 3.42, "Emergency Planning in Fuel Cycle Facilities and Plants Licensed Under 10 CFR Parts 50 and 70;" and a joint NRC/FEMA report, NUREG-0654: FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants for Interim Use and Comment," January 1980, to provide guidance in developing plans for coping with emergencies. Copies of these documents are available at the Commission's Public Document Room, 1717 H Street, NW., Washington, D.C. 20555. Copies of these documents may be purchased from the Government Printing Office. Information on current prices may be obtained by writing the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Publications Sales Manager.

<sup>2</sup> EPZs for power reactors are discussed in NUREG-0396: EPA 520/1-78-016, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants," December 1978. The size of the EPZs for a nuclear power plant shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gas-cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal. Generally, the plume exposure pathway EPZ for nuclear power plants with an authorized power level greater than 250 MW thermal shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 km) in radius.

than power reactors and the degree to which compliance with the requirements of this Section and Sections II, III, IV, and V as necessary will be determined on a case-by-case basis.<sup>3</sup>

#### II. The Preliminary Safety Analysis Report

The Preliminary Safety Analysis Report shall contain sufficient information to ensure the compatibility of proposed emergency plans for both onsite areas and the EPZs, with facility design features, site layout, and site location with respect to such considerations as access routes, surrounding population distributions, land use, and local jurisdictional boundaries for the EPZs in the case of nuclear power reactors as well as the means by which the standards of § 50.47(b) will be met.

As a minimum, the following items shall be described:

A. Onsite and offsite organizations for coping with emergencies and the means for notification, in the event of an emergency, of persons assigned to the emergency organizations.

B. Contacts and arrangements made and documented with local, State, and Federal governmental agencies with responsibility for coping with emergencies, including identification of the principal agencies.

C. Protective measures to be taken within the site boundary and within each EPZ to protect health and safety in the event of an accident; procedures by which these measures are to be carried out (e.g., in the case of an evacuation, who authorizes the evacuation, how the public is to be notified and instructed, how the evacuation is to be carried out); and the expected response of offsite agencies in the event of an emergency.

(D) Features of the facility to be provided for onsite emergency first aid and decontamination and for emergency transportation of onsite individuals to offsite treatment facilities.

E. Provisions to be made for emergency treatment at offsite facilities of individuals injured as a result of licensed activities.

F. Provisions for a training program for employees of the licensee, including those who are assigned specific authority and responsibility in the event of an emergency, and for other persons who are not employees of the licensee but whose assistance may be needed in the event of a radiological emergency.

G. A preliminary analysis that projects the time and means to be employed in the notification of State and local governments and the public in the event of an emergency. A nuclear power plant applicant shall perform a preliminary analysis of the time required to evacuate various sectors and distances within the plume exposure pathway EPZ for transient and permanent populations, noting major impediments to the evacuation or taking of protective actions.

H. A preliminary analysis reflecting the need to include facilities, systems, and methods for identifying the degree of seriousness and potential scope of radiological consequences of emergency situations within and outside the site

<sup>3</sup>Regulatory Guide 2.6 will be used as guidance for the acceptability of research and test reactor emergency response plans.



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boundary, including capabilities for dose projection using real-time meteorological information and for dispatch of radiological monitoring teams within the EPZs; and a preliminary analysis reflecting the role of the onsite technical support center and of the near-site emergency operations facility in assessing information, recommending protective action, and disseminating information to the public.

### III. The Final Safety Analysis Report

The Final Safety Analysis Report shall contain the plans for coping with emergencies. The plans shall be an expression of the overall concept of operation; they shall describe the essential elements of advance planning that have been considered and the provisions that have been made to cope with emergency situations. The plans shall incorporate information about the emergency response roles of supporting organizations and offsite agencies. That information shall be sufficient to provide assurance of coordination among the supporting groups and with the licensee.

The plans submitted must include a description of the elements set out in Section IV for the Emergency Planning Zones (EPZs)<sup>2</sup> to an extent sufficient to demonstrate that the plans provide reasonable assurance that appropriate measures can and will be taken in the event of an emergency.

### IV. Content of Emergency Plans

The applicant's emergency plans shall contain, but not necessarily be limited to, information needed to demonstrate compliance with the elements set forth below, i.e., organization for coping with radiation emergencies, assessment action, activation of emergency organization, notification procedures, emergency facilities and equipment, training, maintaining emergency preparedness, and recovery. In addition, the emergency response plans submitted by an applicant for a nuclear power reactor operating license shall contain information needed to demonstrate compliance with the standards described in Section 50.47(b),<sup>4</sup> and they will be evaluated against those standards. The nuclear power reactor operating license applicant shall also provide an analysis of the time required to evacuate and for taking other protective actions for various sectors and distances within the plume exposure pathway EPZ for transient and permanent populations.

#### A. Organization

The organization for coping with radiological emergencies shall be described, including definition of authorities, responsibilities, and duties of individuals assigned to the licensee's emergency organization and the means for notification of such individuals in the event of an emergency. Specifically, the following shall be included:

1. A description of the normal plant operating organization.
2. A description of the onsite emergency response organization with a detailed

discussion of:

a. Authorities, responsibilities, and duties of the individual(s) who will take charge during an emergency;

b. Plant staff emergency assignments;

c. Authorities, responsibilities, and duties on an onsite emergency coordinator who shall be in charge of the exchange of information with offsite authorities responsible for coordinating and implementing offsite emergency measures.

3. A description, by position and function to be performed, of the licensee's headquarters personnel who will be sent to the plant site to augment the onsite emergency organization.

4. Identification, by position and function to be performed, of persons within the licensee organization who will be responsible for making offsite dose projections, and a description of how these projections will be made and the results transmitted to State and local authorities, NRC, and other appropriate governmental entities.

5. Identification, by position and function to be performed, of other employees of the licensee with special qualifications for coping with emergency conditions that may arise. Other persons with special qualifications, such as consultants, who are not employees of the licensee and who may be called upon for assistance for emergencies shall also be identified. The special qualifications of these persons shall be described.

6. A description of the local offsite services to be provided in support of the licensee's emergency organization.

7. Identification of, and assistance expected from, appropriate State, local, and Federal agencies with responsibilities for coping with emergencies.

8. Identification of the State and/or local officials responsible for planning for, ordering, and controlling appropriate protective actions, including evacuations when necessary.

#### B. Assessment Actions

The means to be used for determining the magnitude of and for continually assessing the impact of the release of radioactive materials shall be described, including emergency action levels that are to be used as criteria for determining the need for notification and participation of local and State agencies, the Commission, and other Federal agencies, and the emergency action levels that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety. The emergency action levels shall be based on in-plant conditions and instrumentation in addition to onsite and offsite monitoring. These emergency action levels shall be discussed and agreed on by the applicant and State and local governmental authorities and approved by NRC. They shall also be reviewed with the State and local governmental authorities on an annual basis.

#### C. Activation of Emergency Organization

The entire spectrum of emergency conditions that involve the alerting or activating of progressively larger segments of the total emergency organization shall be described. The communication steps to be taken to alert or activate emergency personnel under each class of emergency

shall be described. Emergency action levels (based not only on onsite and offsite radiation monitoring information but also on readings from a number of sensors that indicate a potential emergency, such as the pressure in containment and the response of the Emergency Core Cooling System) for notification of offsite agencies shall be described. The existence, but not the details, of a message authentication scheme shall be noted for such agencies. The emergency classes defined shall include: (1) notification of unusual events, (2) alert, (3) site area emergency, and (4) general emergency. These classes are further discussed in NUREG-0654; FEMA-REP-1.

#### D. Notification Procedures

1. Administrative and physical means for notifying local, State, and Federal officials and agencies and agreements reached with these officials and agencies for the prompt notification of the public and for public evacuation or other protective measures, should they become necessary, shall be described. This description shall include identification of the appropriate officials, by title and agency, of the State and local government agencies within the EPZs.<sup>2</sup>

2. Provisions shall be described for yearly dissemination to the public within the plume exposure pathway EPZ of basic emergency planning information, such as the methods and times required for public notification and the protective actions planned if an accident occurs, general information as to the nature and effects of radiation, and a listing of local broadcast stations that will be used for dissemination of information during an emergency. Signs or other measures shall also be used to disseminate to any transient population within the plume exposure pathway EPZ appropriate information that would be helpful if an accident occurs.

3. A licensee shall have the capability to notify responsible State and local governmental agencies within 15 minutes after declaring an emergency. The licensee shall demonstrate that the State/local officials have the capability to make a public notification decision promptly on being informed by the licensee of an emergency condition. By July 1, 1981, the nuclear power reactor licensee shall demonstrate that administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway EPZ. The design objective shall be to have the capability to essentially complete the initial notification of the public within the plume exposure pathway EPZ within about 15 minutes. The use of this notification capability will range from immediate notification of the public (within 15 minutes of the time that State and local officials are notified that a situation exists requiring urgent action) to the more likely events where there is substantial time available for the State and local governmental officials to make a judgment whether or not to activate the public notification system. Where there is a decision to activate the notification system, the State and local officials will determine whether to activate the entire notification system simultaneously or in a graduated or staged manner. The responsibility for activating such a public notification system shall remain with the appropriate government authorities.

<sup>2</sup>These objectives are addressed by specific criteria in NUREG-0654; FEMA-REP-1 entitled "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants for Interim Use and Comment" January 1980.

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### E. Emergency Facilities and Equipment

Adequate provisions shall be made and described for emergency facilities and equipment, including:

1. Equipment at the site for personnel monitoring;
  2. Equipment for determining the magnitude of and for continuously assessing the impact of the release of radioactive materials to the environment;
  3. Facilities and supplies at the site for decontamination of onsite individuals;
  4. Facilities and medical supplies at the site for appropriate emergency first aid treatment;
  5. Arrangements for the services of physicians and other medical personnel qualified to handle radiation emergencies on-site;
  6. Arrangements for transportation of contaminated injured individuals from the site to specifically identified treatment facilities outside the site boundary;
  7. Arrangements for treatment of individuals injured in support of licensed activities on the site at treatment facilities outside the site boundary;
  8. A licensee onsite technical support center and a licensee near-site emergency operations facility from which effective direction can be given and effective control can be exercised during an emergency;
  9. At least one onsite and one offsite communications system; each system shall have a backup power source.
- All communication plans shall have arrangements for emergencies, including titles and alternates for those in charge at both ends of the communication links and the primary and backup means of communication. Where consistent with the function of the governmental agency, these arrangements will include:
- a. Provision for communications with contiguous State/local governments within the plume exposure pathway EPZ. Such communications shall be tested monthly.
  - b. Provision for communications with Federal emergency response organizations. Such communications systems shall be tested annually.
  - c. Provision for communications among the nuclear power reactor control room, the onsite technical support center, and the near-site emergency operations facility; and among the nuclear facility, the principal State and local emergency operations centers, and the field assessment teams. Such communications systems shall be tested annually.
  - d. Provisions for communications by the licensee with NRC Headquarters and the appropriate NRC Regional Office Operations Center from the nuclear power reactor control room, the onsite technical support center, and the near-site emergency operations facility. Such communications shall be tested monthly.

### F. Training

The program to provide for (1) the training of employees and exercising, by periodic drills, of radiation emergency plans to ensure that employees of the licensee are familiar with their specific emergency response duties and (2) the participation in the training and drills by other persons whose assistance may be needed in the event of a radiation emergency shall be described. This shall include a description of specialized initial training and periodic retraining programs to be provided to each of the following categories of emergency personnel:

- a. Directors and/or coordinators of the plant emergency organization;
- b. Personnel responsible for accident assessment, including control room shift personnel;
- c. Radiological monitoring teams;
- d. Fire control teams (fire brigades);
- e. Repair and damage control teams;
- f. First aid and rescue teams;
- g. Medical support personnel;
- h. Licensee's headquarters support personnel;
- i. Security personnel.

In addition, a radiological orientation training program shall be made available to local services personnel, e.g., local Civil Defense, local law enforcement personnel, local news media persons.

The plan shall describe provisions for the conduct of emergency preparedness exercises. Exercises shall test the adequacy of timing and content of implementing procedures and methods, test emergency equipment and communication networks, test the public notification system, and ensure that emergency organization personnel are familiar with their duties. Each licensee shall exercise at least annually the emergency plan for each site at which it has one or more power reactors licensed for operation. Both full-scale and small-scale exercises shall be conducted and shall include participation by appropriate State and local government agencies as follows:

1. A full-scale exercise which tests as much of the licensee, State, and local emergency plans as is reasonably achievable without mandatory public participation shall be conducted:

- a. For each site at which one or more power reactors are located and licensed for operation, at least once every five years and at a frequency which will enable each State and local government within the plume exposure pathway EPZ to participate in at least one full-scale exercise per year and which will enable each State within the ingestion pathway to participate in at least one full-scale exercise every three years.
- b. For each site at which a power reactor is located for which the first operating license for that site is issued after the effective date of this amendment, within one year before the issuance of the operating license for full power, which will enable each State and local government within the plume exposure EPZ and each State within the ingestion pathway EPZ to participate.

2. The plan shall also describe provisions for involving Federal emergency response agencies in a full-scale emergency preparedness exercise for each site at which one or more power reactors are located and licensed for operation at least once every 5 years;

3. A small-scale exercise which tests the adequacy of communication links, establishes that response agencies understand the emergency action levels, and tests at least one other component (e.g., medical or offsite monitoring) of the offsite emergency response plan for licensee, State, and local emergency plans for jurisdictions within the plume exposure pathway EPZ shall be conducted at each site at which one or more power reactors are located and licensed for operation each year a full-scale exercise is not conducted which involves the State(s) within the plume exposure pathway EPZ.

All training, including exercises, shall provide for formal critiques in order to identify weak areas that need corrections. Any weaknesses that are identified shall be corrected.

### G. Maintaining Emergency Preparedness

Provisions to be employed to ensure that the emergency plan, its implementing procedures, and emergency equipment and supplies are maintained up to date shall be described.

### H. Recovery

Criteria to be used to determine when, following an accident, reentry of the facility would be appropriate or when operation could be resumed shall be described.

### V. Implementing Procedures

No less than 180 days prior to scheduled issuance of an operating license for a nuclear power reactor or a licensee to possess nuclear material, 3 copies of each of the applicant's detailed implementing procedures for its emergency plan shall be submitted to the Director of the appropriate NRC Regional Office with 10 copies to the Director of Nuclear Reactor Regulation or, if appropriate, the Director of Nuclear Material Safety and Safeguards. In cases where a decision on an operating license is scheduled less than one year after the effective date of this rule, such implementing procedures shall be submitted as soon as practicable but before full power operation is authorized. Prior to March 1, 1981, licensees who are authorized to operate a nuclear power facility shall submit 3 copies each of the licensee's emergency plan implementing procedures to the Director of the appropriate NRC Regional Office with 10 copies to the Director of Nuclear Reactor Regulation. Three copies each of any changes to maintain these implementing procedures up to date shall be submitted to the same NRC Regional Office with 10 copies to the Director of Nuclear Reactor Regulation or, if appropriate, the Director of Nuclear Material Safety and Safeguards within 30 days of such changes.

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## APPENDIX F

### POLICY RELATING TO THE SITING OF FUEL REPROCESSING PLANTS AND RELATED WASTE MANAGEMENT FACILITIES

1. Public health and safety considerations relating to licensed fuel reprocessing plants do not require that such facilities be located on land owned and controlled by the Federal Government. Such plants, including the facilities for the temporary storage of high-level radioactive wastes, may be located on privately owned property.

2. A fuel reprocessing plant's inventory of high-level liquid radioactive wastes will be limited to that produced in the prior 5 years. (For the purpose of this statement of policy, "high-level liquid radioactive wastes" means those aqueous wastes resulting from the operation of the first cycle solvent extraction system, or equivalent, and the concentrated wastes from subsequent extraction cycles, or equivalent, in a facility for reprocessing irradiated reactor fuels.) High-level liquid radioactive wastes shall be converted to a dry solid as required to comply with this inventory limitation, and placed in a sealed container prior to transfer to a Federal repository in a shipping cask meeting the requirements of 10 CFR Part 71. The dry solid shall be chemically, thermally, and radiolytically stable to the extent that the equilibrium pressure in the sealed container will not exceed the safe operating pressure for that container during the period from canning through a minimum of 90 days after receipt (transfer of physical custody) at the Federal repository. All of these high-level radioactive wastes shall be transferred to a Federal repository no later than 10 years following separation of fission products from the irradiated fuel. Upon receipt, the Federal repository will assume permanent custody of these radioactive waste materials although industry will pay the Federal Government a charge which together with interest on unexpended balances will be designed to defray all costs of disposal and perpetual surveillance. The \* Department of Energy

will take title to the radioactive waste material upon transfer to a Federal repository. Before retirement of the reprocessing plant from operational status and before termination of licensing pursuant to § 50.52, transfer of all such wastes to a Federal repository shall be completed. Federal repositories, which will be limited in number, will be designated later by the Commission.

3. Disposal of high-level radioactive fission product waste material will not be permitted on any land other than that owned and controlled by the Federal Government.

4. A design objective for fuel reprocessing plants shall be to facilitate decontamination and removal of all significant radioactive wastes at the time the facility is permanently decommissioned. Criteria for the extent of decontamination to be required upon decommissioning and license termination will be developed in consultation with competent groups. Opportunity will be afforded for public comment before such criteria are made effective.

5. Applicants proposing to operate fuel reprocessing plants, in submitting information concerning financial qualifications as required by § 50.33(f), shall include information enabling the Commission to determine whether the applicant is financially qualified, among other things, to provide for the removal and disposal of radioactive wastes, during operation and upon decommissioning of the facility, in accordance with the Commission's regulations, including the requirements set out in this appendix.

6. With respect to fuel reprocessing plants already licensed, the licenses will be appropriately conditioned to carry out the purposes of the policy stated above with respect to high-level radioactive fission product wastes generated after installation of new equipment for interim storage of liquid wastes, or after installation of equipment

required for solidification without interim liquid storage. In either case, such equipment shall be installed at the earliest practicable date, taking into account the time required for design, procurement and installation thereof. With respect to such plants, the application of the policy stated in this appendix to existing wastes and to wastes generated prior to the installation of such equipment, will be the subject of a further rule making proceeding.

35 FR 17530

36 FR 15411

\* Amended 45FR14199



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## APPENDIX G—FRACTURE TOUGHNESS REQUIREMENTS

### I. INTRODUCTION AND SCOPE

This appendix specifies minimum fracture toughness requirements for ferritic materials of pressure-retaining components of the reactor coolant pressure boundary of water cooled power reactors to provide adequate margins of safety during any condition of normal operation, including anticipated operational occurrences and system hydrostatic tests, to which the pressure boundary may be subjected over its service lifetime. The requirements of this appendix apply to the following materials:

- A. Carbon and low-alloy ferritic steel plate, forgings, castings, and pipe with specified minimum yield strengths not over 50,000 psi.
- B. Welds and weld heat-affected zones in the materials specified in section I.A.
- C. Materials for bolting and other types of fasteners with specified minimum yield strengths not over 130,000 psi.

Adequacy of the fracture toughness of other ferritic materials shall be demonstrated to the Commission on an individual case basis.

### II. DEFINITIONS

A. "ASME Code" means the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, section III, "Rules for the Construction of Nuclear Power Plant Components" (unless another section is specified edition and addenda<sup>1</sup> as specified by §50.55a, Codes and Standards.\*

B. "Ferritic material" means carbon and low-alloy steels, higher alloy steels including all stainless alloys of the 4xx series, and maraging and precipitation hardening steels with a predominantly body-centered cubic structure.

C. "System hydrostatic tests" means all preoperational system leakage and hydrostatic pressure tests and all system leakage and hydrostatic pressure tests performed during the service life of the pressure boundary in compliance with the ASME Code, section XI, "Rules for Inservice Inspection of Nuclear Reactor Coolant Systems."

D. "Specified minimum yield strength" means the minimum yield strength (in the unirradiated condition) of a material specified in the construction code under which the component is built pursuant to §50.55a.

E. "Lowest service temperature" means the lowest service temperature as defined by paragraph NB-2332 of the ASME Code.

F. "Reference temperature" means the reference temperature,  $RT_{DB}$ , as defined in paragraph NB-2331 of the ASME Code.

G. "Adjusted reference temperature" means the reference temperature as adjusted for irradiation effects (see Appendix H) by adding to  $RT_{DB}$  the temperature shift in the Charpy V-notch curve for the irradiated material relative to that for the unirradiated material, measured at the 50 ft lb level or measured at the 35 mil lateral expansion level, whichever temperature shift is greater.

H. "Beltline region of reactor vessel" means the shell material (including welds and weld heat-affected zones) that directly surrounds the effective height of the fuel element assemblies and any additional height of shell material for which the predicted adjustment of reference temperature at end of service life of the reactor vessel exceeds 50° F.

I. "Material surveillance program" means the provisions for the placement of reactor vessel beltline material specimens in the reactor vessel, and the program of periodic

withdrawal and testing of such specimens to monitor, over the service life of the vessel, changes in the fracture toughness properties of the beltline as a result of exposure to neutron irradiation and the thermal environment.

J. "Integrated surveillance programs" means the combination of individual material surveillance programs as applied to one or more reactor vessels to yield results which serve to monitor the changes in fracture toughness properties for a group of vessels.

### III. FRACTURE TOUGHNESS TESTS

A. To demonstrate compliance with the minimum fracture toughness requirements of sections IV and V of this appendix, ferritic materials shall be tested in accordance with the ASME Code, section NB-2300, "Fracture toughness requirements for materials." Both unirradiated and irradiated ferritic materials shall be tested for fracture toughness properties by means of the Charpy V-notch test specified by paragraph NB-2321.2 of the ASME Code. In addition, when required by the ASME Code, unirradiated ferritic materials shall be tested by means of the dropweight test specified by paragraph NB-2321.1 of the ASME Code. Provision shall be made for supplemental tests in crucial situations such as that described in Section V.C.

B. Charpy V-notch impact tests and dropweight tests shall be conducted in accordance with the following requirements:

1. Location and orientation of impact test specimens shall comply with the requirements of paragraph NB-2322 of the ASME Code.

2. Materials used to prepare test specimens shall be representative of the actual materials of the finished component as required by the applicable rules of the construction code under which the component is built pursuant to §50.55a, except that ferritic materials intended for the reactor vessel beltline region shall comply with the additional requirements of section III.C. of this appendix.

3. Calibration of temperature instruments and Charpy V-notch impact test machines used in impact testing shall comply with the requirements of paragraph NB-2360 of the ASME Code.

4. Individuals performing fracture toughness tests shall be qualified by training and experience and shall have demonstrated competency to perform the tests in accord with written procedures of the component manufacturer.

5. Fracture toughness test results shall be recorded and shall include a certification by the licensee or person performing the tests for the licensee that:

a. The tests have been performed in compliance with the requirements of this appendix,

b. The test data are correctly reported and identified with the material intended for a pressure-retaining component,

c. The tests have been conducted using machines and instrumentation with available records of periodic calibration, and

d. Records of the qualifications of the individuals performing the tests are available upon request.

C. In addition to the test requirements of section III.A. of this appendix, tests on materials of the reactor vessel beltline shall be conducted in accordance with the following minimum requirements:

1. Charpy V-notch (C-) impact tests shall be conducted at appropriate temperatures over a temperature range sufficient to define the C- test curves (including the upper-shelf levels) in terms of both fracture energy and lateral expansion of specimens. Location and orientation of impact test specimens shall comply with the requirements of paragraph NB-2322 of the ASME Code.

2. Materials used to prepare test specimens for the reactor vessel beltline region shall be

taken directly from excess material and welds in the vessel shell course(s) following completion of the production longitudinal weld joint, and subjected to a heat treatment that produces metallurgical effects equivalent to those produced in the vessel material throughout its fabrication process, in accordance with paragraph NB-2211 of the ASME Code. Where seamless shell forgings are used, or where the same welding process is used for longitudinal and circumferential welds in plates, the test specimens may be taken from a separate weldment provided that such a weldment is prepared using excess material from the shell forging(s) or plates, as applicable, the same heat of filler material, and the same production welding conditions as those used in joining the corresponding shell materials.

### IV. FRACTURE TOUGHNESS REQUIREMENTS

A. The pressure-retaining components of the reactor coolant pressure boundary that are made of ferritic materials shall meet the following requirements for fracture toughness during system hydrostatic tests and any condition of normal operation, including anticipated operational occurrences:

1. The materials shall meet the acceptance standards of paragraph NB-2330 of the ASME Code, and the requirements of sections IV.A.2, 3 and 4 and IV.B. of this appendix.

2. For vessels, exclusive of bolting or other fasteners:

a. Calculated stress intensity factors shall be lower than the reference stress intensity factors by the margins specified in the ASME Code Appendix G, "Protection Against Non-Ductile Failure". The calculation procedures shall comply with the procedures specified in the ASME Code Appendix G, but additional and alternative procedures may be used if the Commission determines that they provide equivalent margins of safety against fracture, making appropriate allowance for all uncertainties in the data and analyses.

b. For nozzles, flanges and shell regions near geometric discontinuities, the data and procedures required in addition to those specified in the ASME Code shall provide margins of safety comparable to those required for shells and heads remote from discontinuities.

c. Whenever the core is critical, the metal temperature of the reactor vessel shall be high enough to provide an adequate margin of protection against fracture, taking into account such factors as the potential for overstress and thermal shock during anticipated operational occurrences in the control of reactivity. In no case when the core is critical (other than for the purpose of low-level physics tests) shall the temperature of the reactor vessel be less than the minimum permissible temperature for the inservice system hydrostatic pressure test nor less than 40°F above that temperature required by section IV.A.2.a.

d. If there is no fuel in the reactor during the initial preoperational system leakage and hydrostatic pressure tests, the minimum permissible test temperature shall be determined in accordance with paragraph G2410 of the ASME Code except that the factor of safety applied to each term making up the calculated stress intensity factor may be reduced to 1.0. In no case shall the test temperature be less than  $RT_{DB} + 50^\circ F$ .

3. Materials for piping, pumps, and valves shall meet the requirements of paragraph NB-2332 of the ASME Code. Materials for bolting and other fasteners shall meet the requirements of paragraph NB-2333\*\* of the ASME Code.

B. Reactor vessel beltline materials shall have minimum upper-shelf energy, as deter-

<sup>1</sup> Copies may be obtained from the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, N.Y. 10017. Copies are available for inspection at the Commission's Public Document Room, 1717 H St. N.W., Washington, D.C.

\*Amended 41 FR 6256.

\*\* Amended 45 FR 66575



## PART 50 • PROPOSED RULE MAKING

45 FR 54708

Published 8/15/80

Comment period expires 9/29/80

### 10 CFR Part 50

#### Functional Criteria for Emergency Response Facilities

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Request for comments.

**SUMMARY:** The NRC staff is developing guidance for an acceptable method for providing the emergency response facilities needed to implement the plans for coping with emergencies that are required by § 50.34 and Appendix E of 10 CFR Part 50. Development of this guidance is motivated by the experience from the accident at the Three Mile Island nuclear power plant and the recommendations resulting from the investigations of the accident. The proposed functional criteria of the four elements of the emergency response facilities, the Safety Parameter Display (SPDS), the Technical Support Center (TSC), the Emergency Operations Facility (EOF), and the Nuclear Data Link (NDL) are contained in the document NUREG-0696, "Functional Criteria for Emergency Response Facilities." The staff is now soliciting public comment on these functional criteria and the schedule for implementation discussed below.

**DATES:** Comment period expires: September 29, 1980.

**ADDRESSES:** Written comments or suggestions should be sent to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments received may be examined at the Commission's Public Document Room at 1717 H Street, NW, Washington, D.C. A copy of the functional criteria (NUREG-0696, "Functional Criteria for Emergency Response Facilities") is also available for inspection at the same address. Requests for single copies at no cost should be made in writing to the Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Phone 301-492-9530).

**FOR FURTHER INFORMATION CONTACT:** Mr. Warren Minners, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Phone 301-492-7581).

**SUPPLEMENTARY INFORMATION:** The investigations of the accident at the Three Mile Island Unit 2 nuclear power plant identified the need for extensive improvements in emergency preparedness at nuclear power plants.

Areas identified as deficient and in need of improvement included the organization of personnel to control, manage, assess, support and coordinate activities both on and off the site during emergency situations; the facilities for these personnel; the availability of information needed to assess and manage the reactor, other sources of radioactivity and the actual and potential radiological consequences; and the provisions for disseminating accurate and timely information, warnings and instructions to local and state agencies, the affected population and the public in general. An acceptable method of providing emergency response facilities is proposed in NUREG-0696, "Functional Criteria for Emergency Response Facilities." These proposed facilities include a Technical Support Center (TSC) and an Emergency Operations Facility (EOF) which are dedicated areas for the management, assessment, support and coordination of accident situations. Also included with these facilities is a Safety Parameter Display which monitors the safety status of the plant and the Nuclear Data Link which transmits critical plant variables to the NRC headquarters.

#### Background

The current requirements for emergency preparedness are contained in Appendix E to 10 CFR Part 50, "Emergency Plans for Production and Utilization Facilities," which was published in December 1970 and amended in January 1973. In conjunction with this rule, the Commission developed a document entitled "Guide to the Preparation of Emergency Plans for Production and Utilization Facilities," to help applicants establish adequate emergency plans. More complete guidance for an acceptable method for complying with this regulation, including general guidance for emergency facilities, is contained in Revision 1 of Regulatory Guide 1.101 "Emergency Planning for Nuclear Power Plants," published in March 1977.

As part of the responsibilities of the NRC and FEMA under the Atomic Energy Act, as amended, and the President's statement of December 7, 1979, the staffs of the two agencies have jointly prepared NUREG-0654 (FEMA-REP-1) "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" which was published in January 1980 for interim use and comment. The purpose of NUREG-0654 is to provide a common reference and interim guidance for state and local governments, nuclear facility operators, the NRC, FEMA, and other federal agencies in the development and review of state and local government and licensee emergency plans and

preparedness, including emergency support facilities. The NRC also published (44 FR 75167) a proposed revision to its emergency planning regulations including Appendix E to 10 CFR Part 50. The proposed revision to the regulations includes a specific requirement for emergency support facilities. On June 16, 1980, the Commission issued a Statement of Policy (45 FR 41738) as further guidance to Boards and the staff that current operating license applications should be measured against the regulations as augmented by the requirements, including requirements for emergency support facilities, listed in NUREG-0694 "TMI-Related Requirements for New Operating Licensees."

#### Bases for the Functional Criteria

These proposed emergency facilities are needed because effective emergency response requires the establishment of dedicated areas for the management, assessment, support and coordination of potential or actual accident situations. To reduce congestion and confusion, the use of the control room should be limited to direct control of the plant. However, a nearby area designated as the Technical Support Center (TSC) is proposed to accommodate the technical personnel who support control room functions, evaluate and diagnose plant conditions and manage and coordinate other emergency response functions related to the plant. A second area, designated as the Emergency Operations Facility (EOF) is proposed to provide a planned, organized control focal point for the coordination of onsite and offsite activities. The EOF is to be located offsite and equipped to function as the center for the licensee's management, control and assessment of all activities related to an emergency having potential or actual environment consequences. A primary function of the EOF would be the analysis of plant effluent, meteorological conditions, offsite radiation releases and offsite dose projections.

In addition to these facilities, two associated functions are proposed. The first is directed to the ability of the reactor operators to readily monitor the safety status of the plant. The investigators of the TMI accident criticized the design of nuclear power plant control rooms and questioned the ability of operators to quickly and correctly interpret the multitude of alarms, indicators, and other information that are currently installed in control rooms. As an aid to the operators in monitoring the status of the plant during normal operation transients and accident a Safety Parameter Display System (SPDS) is proposed which would provide a continuous concise display of critical plant variables. This display would be provided in the TSC and the EOF.

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The second associated function is that of the NRC in accident situations. In addition to sending personnel to the site if an incident occurs, information is required by the NRC headquarters staff to monitor the licensee's actions, provide advice and be prepared, in extreme circumstances, to direct that some actions be taken. In order to accomplish this function, information concerning the status of the plant, radiation releases and meteorology would be required to be transmitted to the NRC. A proposed method of providing this information is through an acquisition, transmission, and display system designated as the Nuclear Data Link. The NDL would condition, process, and transmit a limited set of critical data from each plant for display at the NRC Operations Center in Bethesda, Maryland.

All of these elements of the emergency support facilities (the SPDS, TSC, EOF, and NDL) are interrelated and should be designed as an integrated system. The separate elements have some common and overlapping functions and all require information and data on the past or current status of the core, the plant, and the actual or potential release of radioactivity. The means of acquiring, processing, transmitting, and displaying this information and data is a major portion of the functional criteria that affects the design and integration of the individual elements. Therefore, the functional criteria for all elements have been provided in one document.

The staff also proposed the following implementation schedule. All licensees and applicants would submit to the NRC, by January 1, 1981, or prior to issuance of an operating license, whichever is later, a description of the design of the emergency response facilities; a schedule for the design, installation and construction of the facilities and proposed Technical Specifications for the Limiting Condition of Operation and Surveillance of these facilities. These emergency response facilities would be operational, but not necessarily meet the design criteria for associated instrumentation, by April 1, 1982, or prior to issuance of an operating license, whichever is later. The design criteria for associated instrumentation is specified in the proposed Revision 2 to Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident." The emergency response facilities would meet the design criteria of Revision 2 to Regulatory Guide 1.97 as specified for the guide. The currently proposed implementation schedule for Revision 2 to Regulatory Guide 1.97 is

that it will be applied to all plants issued operating licenses after June 1982 and to all other plants by June 1, 1983.

## PART 51 • LICENSING AND REGULATORY POLICY AND PROCEDURES...

### § 51.6 Notice of intent.

Whenever the Commission determines that an environmental impact statement will be prepared in connection with an action, a notice of intent will be published and distributed in accordance with § 51.50(b).

### § 51.7 Negative declarations; environmental impact appraisals.

(a) Negative declarations. The negative declaration required by § 51.5(c) will be prepared prior to the taking of the associated action and will state that the Commission has decided not to prepare an environmental impact statement for the particular action and that an environmental impact appraisal setting forth the basis for that determination is available for public inspection. Negative declarations will be published and made publicly available in accordance with §§ 51.50(d) and 51.55. Lists of negative declarations will be maintained and made publicly available in accordance with § 51.54(b).

(b) Environmental impact appraisals. An environmental impact appraisal will be prepared in support of all negative declarations. The appraisal will include:

(1) A description of the proposed action;

(2) A summary description of the probable impacts of the proposed action on the environment; and

(3) The basis for the conclusion that no environmental impact statement need be prepared.

Lists of environmental impact appraisals will be maintained and made publicly available in accordance with § 51.54(b). Impact appraisals will be made available to the public upon request in accordance with § 51.55.

### Subpart B—Facilities

### § 51.20 Applicant's Environmental Report—Construction Permit Stage.

(a) Environmental considerations. Each applicant<sup>1</sup> for a permit to construct a production or utilization facility covered by § 51.5(a) shall submit with its application a separate document, entitled "Applicant's Environmental Report—Construction Permit Stage," which contains a description of the proposed action, a statement of its purposes, and a description of the environment affected, and which discusses the following considerations:

(1) The probable impact of the proposed action on the environment;

(2) Any probable adverse environmental effects which cannot be avoided should the proposal be implemented;

(3) Alternatives to the proposed action;

(4) The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and

(5) Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented. The discussion of alternatives to the proposed action required by paragraph (a)(3) shall be sufficiently complete to aid the Commission in developing and exploring, pursuant to section 102(2)(E)\* of NEPA, "appropriate alternatives"\*\*\* in any proposal

<sup>1</sup> Where the "applicant", as used in this part, is a Federal agency, different arrangements for implementing NEPA may be made, pursuant to the Guidelines established by the Council on Environmental Quality.

\*Amended 43 FR 7209.

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which involves unresolved conflicts concerning alternative uses of available resources."

(b) Cost-benefit analysis. The Environmental Report required by paragraph (a) shall include a cost-benefit analysis which considers and balances the environmental effects of the facility and the alternatives available for reducing or avoiding adverse environmental effects, as well as the environmental, economic, technical and other benefits of the facility. The cost-benefit analysis shall, to the fullest extent practicable, quantify the various factors considered. To the extent that such factors cannot be quantified, they shall be discussed in qualitative terms. The Environmental Report should contain sufficient data to aid the Commission in its development of an independent cost-benefit analysis.

(c) Status of compliance. The Environmental Report required by paragraph (a) shall include a discussion of the status of compliance of the facility with applicable environmental quality standards and requirements (including, but not limited to, applicable zoning and land-use regulations and thermal and other water pollution limitations or requirements promulgated or imposed pursuant to the Federal Water Pollution Control Act) which have been imposed by Federal, State, regional, and local agencies having responsibility for environmental protection. The discussion of alternatives in the Report shall include a discussion whether the alternatives will comply with such applicable environmental quality standards and requirements. The environmental impact of the facility and alternatives shall be fully discussed with respect to matters covered by such standards and requirements irrespective of whether a certification or license from the appropriate authority has been obtained (including, but not limited to, any certification obtained pursuant to section 401 of the Federal Water Pollution Control Act). Such discussion shall be reflected in the cost-benefit analysis prescribed in paragraph (b). While satisfaction of Commission standards and criteria pertaining to radiological effects will be necessary to meet the licensing requirements of the Atomic Energy Act, the cost-benefit analysis prescribed in paragraph (b) shall, for the purposes of NEPA, consider the radiological effects, together with the other effects, of the facility and alternatives.

(d) The information submitted pursuant to paragraphs (a)-(c) of this section should not be confined to data supporting the proposed action but should include adverse data as well.

(e) The Environmental Report required by paragraph (a) for light-water-cooled nuclear power reactors shall take Table S-3, Table of Uranium Fuel Cycle Environmental Data, as the basis for evaluating the contribution of the environmental effects of uranium

\*No permit or license will, of course, be issued with respect to an activity for which a certification required by section 401 of the Federal Water Pollution Control Act has not been obtained.

mining and milling, the production of uranium hexafluoride, isotopic enrichment, fuel fabrication, reprocessing of irradiated fuel, transportation of radioactive materials and management of low level wastes and high level wastes related to uranium fuel cycle activities to the environmental costs of licensing the nuclear power reactor. Table S-3 shall be included in the Report and may be supplemented by a discussion of the environmental significance of the data set forth in the Table as weighed in the cost-benefit analysis for the proposed facility. This paragraph applies to any applicant's environmental report submitted on September 4, 1979, or thereafter.

(f) Number of copies. Each applicant for a permit to construct a production or utilization facility covered by § 51.5(a) shall submit the number of copies, as specified in § 51.40, of the Environmental Report required by § 51.5(a).

(g) (1) The Environmental Report required by paragraph (a) for light-water cooled nuclear power reactors shall contain either (i) a statement that the transportation of cold fuel to the reactor and irradiated fuel from the reactor to a fuel reprocessing plant and the transportation of solid radioactive wastes from the reactor to waste burial grounds is within the scope of this paragraph, and as the contribution of the environmental effects of such transportation to the environmental costs of licensing the nuclear power reactor, the values set forth in the following Summary Table S-4; or (ii) if such transportation does not fall within the scope of this paragraph, a full description and detailed analysis of the environmental effects of such transportation and, as the contribution of such effects to the environmental costs of licensing the nuclear power reactor, the values determined by such analyses for the environmental impact under normal conditions of transport and the environmental risk from accidents in transport.

(2) This paragraph applies to the transportation of fuel and wastes to and from a nuclear power reactor only if:

(i) The reactor is a light-water-cooled nuclear power reactor with a core thermal power level not exceeding 3,800 megawatts;

(ii) The reactor fuel is in the form of sintered uranium dioxide pellets encapsulated in zircaloy rods with a uranium-235 enrichment not exceeding 4% by weight;

(iii) The average level of irradiation of the irradiated fuel from the reactor does not exceed 33,000 megawatt days per metric ton and no irradiated fuel assembly is shipped until at least 90 days have elapsed after the fuel assembly was discharged from the reactor;

(iv) Waste (other than irradiated fuel) shipped from the reactor is in the form of packaged, solid wastes; and

(v) Unirradiated fuel is shipped to the reactor by truck; irradiated fuel is shipped from the reactor by truck, rail, or barge; and waste other than irradiated fuel is shipped from the reactor by truck or rail.

(3) This paragraph does not apply to any applicant's environmental report submitted prior to February 5, 1975.

### § 51.21 Applicant's Environmental Report—Operating License Stage.

Each applicant for a license to operate a production or utilization facility covered by § 51.5(a) shall submit with its application the number of copies, as specified in § 51.40, of a separate document,\* to be entitled "Applicant's Environmental Report—Operating License Stage," which discusses the same matters described in § 51.20 but only to the extent that they differ from those discussed or reflect new information in addition to that discussed in the final environmental impact statement prepared by the Commission in connection with the construction permit. The "Applicant's Environmental Report—Operating License Stage" may incorporate by reference any information contained in the Applicant's Environmental Report or final environmental impact statement previously prepared in connection with the construction permit. With respect to the operation of nuclear reactors, the applicant, unless otherwise required by the Commission, shall submit the "Applicant's Environmental Report—Operating License Stage" only in connection with the first licensing action that would authorize full power operation of the facility.

#### DRAFT ENVIRONMENTAL IMPACT STATEMENTS

### § 51.22 General.

The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards or their designee, as appropriate, will prepare a draft environmental impact statement for facility licensing actions covered by §§ 51.20 and 51.21 as soon as practicable after receipt of the Applicant's Environmental Report and publication of the notice of intent and availability of the report required by § 51.50.

### § 51.23 Contents of Draft Environmental Statement.

(a) The draft environmental impact statement will include the matters specified in § 51.20 (a), (e), and (g) and § 51.21, as appropriate.

(b) The draft environmental impact statement will contain an analysis of any problems and objections raised by other Federal, State, and local agencies and by interested persons in the review process.

(c) The draft environmental impact statement will include a preliminary cost-benefit analysis which considers and balances the environmental and other effects of the facility and the alternatives available for reducing or avoiding adverse environmental and other effects, as well as the environmental, economic, technical and other benefits of the facility. The contribution of the environmental effects of the uranium fuel cycle activities specified in § 51.20(e) shall be evaluated on the basis of impact values set forth in Table S-3, Table of Uranium Fuel Cycle Environmental Data, which shall be set out in the draft

\*Amended 41 FR 15832.

+Amended 44 FR 16360.



## PART 70 • DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

(c) Each license issued to a person for use of special nuclear material in activities in which special nuclear material will be produced shall (subject to the provisions of § 70.41(b)) be deemed to authorize such person to receive title to own, acquire, receive, possess, use, and transfer the special nuclear material produced in the course of such authorized activities.

(d) No license will be issued by the Commission to any person within the United States if the Commission finds that the issuance of such license would be inimical to the common defense and security or would constitute an unreasonable risk to the health and safety of the public.

(e) [Deleted 43 FR 6915.]

### § 70.32 Conditions of licenses.

(a) Each license shall expire (except as provided in § 70.33(b), at the time specified in the license and shall contain and be subject to the following conditions:

(1) [Deleted 32 FR 2562.]

(2) No right to the special nuclear material shall be conferred by the license except as defined by the license;

(3) Neither the license nor any right under the license shall be assigned or otherwise transferred in violation of the provisions of the act;

(4) All special nuclear material shall be subject to the right of recapture or control reserved by section 108 and to all other provisions of the act;

(5) No special nuclear material may be used in any utilization or production facility except in accordance with the provisions of the act;

(6) The licensee shall not use the special nuclear material to construct an atomic weapon or any component of an atomic weapon;

(7) Except to the extent that the indemnification and limitation of liability provisions of Part 140 of this chapter apply, the licensee will hold the United States and the \* Department harmless from any damages resulting from the use or possession of special nuclear material leased from the \* Department by the licensee;

(8) The license shall be subject to, and the licensee shall observe, all applicable rules, regulations and orders of the Commission.

(b) The Commission may incorporate in any license such additional conditions and requirements with respect to the licensee's ownership, receipt, possession, use, and transfer\*\* of

special nuclear material as it deems appropriate or necessary in order to:

(1) Promote the common defense and security;

(2) Protect health or to minimize danger to life or property;

(3) Protect Restricted Data;

(4) Guard against the loss or diversion of special nuclear material;

(5) Require such reports and the keeping of such records, and to provide for such inspections, of activities under the license as may be necessary or appropriate to effectuate the purposes of the act and regulations thereunder.

(c) Each license authorizing the possession at any one time and location of special nuclear material in a quantity exceeding one effective kilogram of special nuclear material and the use of such special nuclear material except those uses involved in the operation of a nuclear reactor licensed pursuant to Part 50 of this chapter and those involved in a waste disposal operation and in sealed sources, shall contain and be subject to a condition requiring the licensee to maintain and follow (1) the program for control and accounting for special nuclear material and fundamental material controls described pursuant to § 70.22 (b) or § 70.58(1), (2) the measurement control program for special nuclear materials control and accounting described pursuant to § 70.57(c), and (3) such other material control procedures as the Commission determines to be essential for the safeguarding of special nuclear material and providing that the licensee shall make no change which would decrease the effectiveness of the material control and accounting program prepared pursuant to §§ 70.22(b), 70.58(1), or 70.51(g), and the measurement control program prepared pursuant to § 70.57(c) without the prior approval of the Commission. A licensee desiring to make such changes shall submit an application for amendment to his license pursuant to § 70.34.

The licensee shall maintain records of changes to the material control and accounting program made without prior Commission approval, for a period of five years from the date of the change, and shall furnish to the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the appropriate NRC Regional Office shown in Appendix A of Part 73 of this chapter, a report containing a description of each change within:

(1) Two months of the change if it pertains to uranium-233, uranium-235 contained in uranium enriched 20 percent or more in the uranium-235 isotope, or plutonium, except plutonium containing 80 percent or more by weight of the isotope Pu-238, and

(2) Six months of the change if it pertains to uranium enriched less than 20

percent in the uranium-235 isotope, or plutonium containing 80 percent or more by weight of the isotope Pu-238

(d) The licensee shall make no change which would decrease the effectiveness of the plan for physical protection of special nuclear material in transit prepared pursuant to § 70.22(g) or 73.20(c) of this chapter without the prior approval of the Commission. A licensee desiring to make such changes shall submit an application for a change in the technical specifications incorporated in his license, if any, or for an amendment to his license pursuant to § 50.90 or § 70.34 of this chapter, as appropriate. The licensee may make changes to the plan for physical protection of special nuclear material without prior Commission approval if these changes do not decrease the effectiveness of the plan. A report containing a description of each change shall be furnished the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the appropriate NRC Regional Office shown in Appendix A of Part 73 of this chapter, within two months after the change.

(e) The licensee shall make no change which would decrease the effectiveness of a security plan prepared pursuant to § 70.22(h) or § 73.20(c) without the prior approval of the Commission. A licensee desiring to make such a change shall submit an application for an amendment to his license pursuant to § 70.34.

The licensee shall maintain records of changes to the plan made without prior Commission approval, for a period of two years from the date of the change, and shall furnish to the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the appropriate NRC Regional Office shown in Appendix A of Part 73 of this chapter, a report containing a description of each change within two months after the change is made.

\*\* Amended 43 FR 6915.

‡ Amended 41 FR 16445.

\* Amended 45FR14199

## PART 70 • DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

(g) The licensee shall prepare and maintain safeguards contingency plan Procedures in accordance with Appendix C of 10 CFR Part 73 for effecting the actions and decisions contained in the Responsibility Matrix of his safeguards contingency plan. The licensee shall make no change that would decrease the safeguards effectiveness of the first four categories of information (Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix) contained in any licensee safeguards contingency plan prepared pursuant to §§ 70.22(g), 70.22(j), 73.30(g), or 73.40 of this chapter without the prior approval of the Commission. A licensee desiring to make such a change shall submit an application for an amendment to his license pursuant to § 70.34 of this chapter. The licensee may make changes to the licensee safeguards contingency plan without prior Commission approval if the changes do not decrease the safeguards effectiveness of the plan. The licensee shall maintain records of changes to any such plan made without prior approval for a period of 2 years from the date of the change and shall furnish to the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the appropriate NRC Regional Office specified in Appendix A of Part 73 of this chapter, a report containing a description of each change within 2 months after the change is made.

(h) Each licensee shall notify the Commission in writing when the licensee decides to permanently discontinue all activities involving materials authorized under the license. This notification requirement applies to all specific licenses issued under this Part.

(i) Licensees required to submit emergency plans in accordance with § 70.22(i) shall follow and maintain in effect emergency plans approved by the Commission. The licensee may make changes to the approved plans without Commission approval only if such changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the requirements of Appendix E, Section IV, 10 CFR Part 50. The licensee shall furnish the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the appropriate NRC Regional Office specified in Appendix D, Part 20 of this Chapter, each change within six months after the change is made. Proposed changes that decrease the effectiveness of the approved emergency plan shall not be implemented without prior application to and prior approval by the Commission.

### § 70.33 Renewal of licenses.

(a) Applications for renewal of a license should be filed in accordance with §§ 70.21 and 70.22. Information contained in previous applications, statements or reports filed with the Commission under the license may be incorporated by reference: *Provided*, That such references are clear and specific.

(b) In any case in which a licensee not less than thirty (30) days prior to expiration of his existing license, has filed an application in proper form for renewal of a license, such existing license shall not expire until the application for a renewal has been finally determined by

the Commission.

### § 70.34 Amendment of licenses.

Applications for amendment of a license shall be filed in accordance with § 70.21(a) and shall specify the respects in which the licensee desires his license to be amended and the grounds for such amendment.

### § 70.35 Commission action on applications to renew or amend.

In considering an application by a licensee to renew or amend his license, the Commission will apply the criteria set forth in § 70.23.

### § 70.36 Inalienability of licenses.

No license granted under the regulations in this part and no right to possess or utilize special nuclear material granted by any license issued pursuant to the regulations in this part shall be transferred, assigned or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person unless the Commission shall after securing full information, find that the transfer is in accordance with the provisions of the act, and shall give its consent in writing.

### § 70.37 Disclaimer of warranties.

Neither the Government nor the Commission makes any warranty or other representation that special nuclear material (a) will not result in injury or damage when used for purposes approved by the Commission, (b) will accomplish the results for which it is requested and approved by the Commission, or (c) is safe for any other use.

### § 70.38 [Deleted 40 FR 8774.]

### § 70.39 Specific licenses for the manufacture or initial transfer\*\* of calibration or reference sources.

(a) An application for a specific license to manufacture\* or initially transfer\*\* calibration or reference sources containing plutonium, for distribution to per-

\*Amended 32 FR 2562.

\*\*Amended 43 FR 6915.

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45 FR 53753

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### INTERAGENCY WORKING GROUP ON A HAZARDOUS SUBSTANCES EXPORT POLICY

#### Draft Report

**AGENCY:** Interagency Working Group on a Hazardous Substances Export Policy.

**ACTION:** Draft report.

**SUMMARY:** The Interagency Working Group was convened to review the authorities under which and the procedures by which the Federal government regulates the export of substances whose use in the United States is banned or significantly restricted. The fourth draft report of the Working Group was completed in January 1980. That report was distributed widely and was the subject of a series of consultation meetings with representatives of a variety of affected interests—the chemical, pesticides, consumer product and drug industries; consumer, environmental, and health groups; and labor organizations. Based upon the comments of the participants at these meetings and upon the views and suggestions of individual Federal agencies in response to the fourth draft, the Working Group has prepared a fifth draft report.

The report, which is printed below, discusses the nature and scope of the problems posed by the export of hazardous substances, summarizes the existing statutory authorities and regulatory procedures that are now used or may be used to address these problems, identifies the policy considerations that should be taken into account in the development of a hazardous substances export policy, and proposes a multipronged policy that reflects those considerations.

The Working Group is publishing the fifth draft report in the *Federal Register* in order to assure that it receives wide distribution. Comments on the report are welcome and will be reviewed and analyzed during the preparation of the Working Group's final report.

**DATE:** Please submit any comments you wish to make on or before September 12, 1980.

**ADDRESS:** Send comments to the Interagency Working Group on a Hazardous Substances Export Policy, c/o Esther Peterson, Special Assistant to the President for Consumer Affairs, 495 Old Executive Office Building, Washington, D.C. 20500.

**FOR FURTHER INFORMATION CONTACT:**

Ed Cohen or Mark Goldberg at the White House Office of Consumer Affairs at (202) 456-6228 or Kitty Gilman or Jean

Halloran of the Council on Environmental Quality at (202) 395-5790.

#### Introduction

In early summer of 1978, an Interagency Working Group was established to consider Federal policy on the export of hazardous substances which are banned or whose use is significantly restricted in the United States.<sup>1</sup> The catalyst for convening the Working Group was the national and international controversy over U.S. exports of TRIS-treated children's sleepwear, after it has been banned for sale in the United States.

The export of TRIS-treated sleepwear was not an isolated incident.

Congressional hearings in July 1978<sup>2</sup> pointed out numerous instances in which American firms exported, without restriction on the part of the U.S. government, substances that had been banned or strictly limited for use in this country. In some of these cases, the risks and benefits of using the exported products in the importing countries may have been different from those in the United States due to differing economic, social, and cultural conditions.

However, in most instances, there was little evidence of a special U.S. government effort to share with importing countries the information which had led the United States to ban or strictly limit the use of the products, so that the importing countries could make their own informed judgments. The unrestrained export of hazardous substances by U.S. firms raised questions about this country's ethical responsibility for the hazards arising from hazardous exports, questions that have important implications for U.S. trade and foreign relations. One result of this concern was that in 1978 Congress amended several regulatory acts to provide notification to importers and/or to the government of the importing nation when certain banned products are exported from the United States.

U.S. manufacturers have a strong stake in fostering a positive attitude

among foreign governments and consumers toward products bearing the label "Made in USA." Sale abroad of banned products tends to undermine foreign confidence in American-made products. Among the potential consequences are losses in export trade and thus negative effects on our balance of payments, and possible adverse long-term effects on foreign markets.

Uncontrolled export of hazardous substances also tends to damage our relations with foreign countries. Importing countries—generally the poorer, less developed nations of the world—have urged that exporting countries exercise restraint in sending abroad products that are banned for use at home and provide full information on the products' effects. UN Environment Programme resolutions (formally called decisions) in 1977, 1978, and 1980 asked nations not to permit export of hazardous substances without the knowledge and consent of the importing countries. To these countries, a U.S. government policy that tolerates unrestrained export of banned products could appear callous or hostile and thus be detrimental to U.S. foreign policy interests.

The purpose of the Working Group was to explore the nature and scope of problems related to the export of banned or significantly restricted substances, and, if appropriate, to propose a government policy to which all Federal agencies would subscribe.

#### II. Definition of Banned and Significantly Restricted Substances

The Working Group found that careful definition of terms was necessary, to make clear what substances should be considered for purposes of a policy to control export of banned and significantly restricted substances. The Working Group has generically defined these substances to mean a pesticide, chemical, food (including meat, meat product, or poultry), food additive, drug, cosmetic, medical device, electronic product, biological product, color additive, or consumer product for which a Federal agency has taken any of the following types of regulatory actions in order to protect against an actual or potential threat to the health or safety of the United States public or to the environment:

(1) Final rulemaking or adjudicatory action (including emergency or interim binding action) which denies or revokes approval for, or prohibits, the manufacture, production, use, or sale in the United States.

(2) Final rulemaking or adjudicatory action (including emergency or interim binding action) which prohibits or

<sup>1</sup> The Working Group, convened by Esther Peterson, Special Assistant to the President for Consumer Affairs, included the Departments of State, Agriculture, Commerce, Energy, Health and Human Services (Food and Drug Administration), Justice, Defense, Labor, Transportation, and Treasury, and the Environmental Protection Agency, Consumer Product Safety Commission, Export-Import Bank, Overseas Private Investment Corporation, Action Agency for International Development, Regulatory Council, Office of Management and Budget, Council on Environmental Quality, Nuclear Regulatory Commission, Office of the U.S. Trade Representative, and several other Executive offices.

<sup>2</sup> Hearings before the Subcommittee on Commerce, Consumer and Monetary Affairs of the House Committee on Government Operations.



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revokes approval of most significant uses in the United States.

(3) Withholding, or absence of registration or approval for any substance for which Federal law requires Federal agency registration or approval before manufacture, production, use, or sale in the United States.

A more detailed definition of "banned and significantly restricted substances," in which the substances and products considered under the policy are defined in terms of regulatory action under certain sections of certain statutes, is provided in Section VII.

Certain categories of products were excluded from the Working Group report because of their special legislative history or because of the special problems they raise: alcohol, tobacco, and firearms; military weapons and equipment; narcotic and psychotropic substances; and nuclear fuels. Hazardous non-nuclear wastes are not included since a current Administration effort led by the State Department is developing a policy to deal with exports of these wastes. Also generally excluded from consideration are the export of hazardous production facilities, and U.S. financial assistance for such facilities. Substances which may cause hazardous workplace conditions are included in parts of the policy.

### III. Nature and Scope of the Problem

Since there are only limited controls at present on export of banned and significantly restricted substances, the government has no mechanisms for monitoring or valuing such exports. Further, many firms resist disclosure of the extent or destination of export products. Some of them consider their marketing plans trade secrets. Thus, no estimates are available of the dollar value of such substances exported from the United States.

Virtually unrestrained export is currently allowed for many substances banned for sale in the United States: certain food dyes; cyclamate sweeteners; and drugs, cosmetics, and antibiotics that are adulterated or misbranded. Other banned substances may be exported provided notice is sent to the importing nation. These include most CPSC and EPA-regulated products. Finally, a few classes of banned substances, including unapproved drugs and banned medical devices, are categorically prohibited from export.

Several examples, drawn from Congressional hearings and information provided by federal agencies, suggest the nature and scope of the problem. Some of the examples also suggest the

complexity of controlling the export of substances which the United States may consider too hazardous to use but which other countries, with differing needs and conditions, may judge differently.

- Complying with federal requirements, U.S. manufacturers treated children's sleepwear with the chemical flame-retardant TRIS. In April 1977, after the carcinogenic hazard of the substance was discovered, the Consumer Product Safety Commission (CPSC) banned domestic sales of TRIS-treated sleepwear. According to Congressional testimony, however, exports of the garments continued for more than a year. Approximately 2.4 million pieces valued at \$1.2 million were reported to have been shipped abroad. Most banned consumer products may still be exported, provided the government of the importing country is notified of the shipment.

- In March 1978, the Food and Drug Administration (FDA) issued a final rule prohibiting the nonessential uses of certain chlorofluorocarbons (CFCs) as propellants in self-pressurized containers of foods, drugs and cosmetics. EPA at the same time prohibited domestic production, processing, and use of CFCs for nonessential aerosol propellant use. These actions were taken because chlorofluorocarbons may deplete stratospheric ozone, leading to an increase in skin cancer, climatic changes, and other adverse effects. EPA also banned the processing of CFCs into aerosols for export, though it did not ban the export of unprocessed CFCs. Subsequently, some manufacturers requested information from FDA as to whether or not it was legal to export cosmetics (e.g., hair sprays) containing chlorofluorocarbons as propellants. FDA advised these firms that shipping cosmetic products to other countries was lawful as long as they were not prohibited by the country to which they are shipped.

- The very powerful and very hazardous pesticide, Leptophos, never registered by EPA for domestic use, was manufactured in the United States principally for export. According to Congressional testimony, nearly 14 million pounds was exported to 50 countries between 1971 and 1976. In 1971 and 1972 a number of Egyptian farmers were found to be suffering from hallucinations and impairment of vision and speech after using Leptophos, and 1,200 water buffalos were reported to have died from exposure to the pesticide.

- According to the General Accounting Office, over 500 million pounds of pesticides were exported from

the United States in 1976. Of these exports, approximately 30 percent (more than 160 million pounds) were pesticides not registered for use in the United States. This includes pesticides whose "active ingredient" is contained in registered products, but which is being exported in a different formulation; pesticides for which registration has never been sought; and pesticides whose registration has been cancelled, suspended, or denied. Unregistered pesticides may lawfully be exported provided that the product is labeled as unregistered (and meets other labeling requirements) and that importers are notified and acknowledge that the pesticide is unregistered. A copy of the acknowledgement is sent to EPA for transmittal to the foreign government.

- The World Health Organization has estimated that approximately 500,000 human poisonings, including about 5,000 deaths, are attributable to pesticides each year. Many of these are due to use of certain classes of pesticides which degrade quickly but are extremely toxic when applied. EPA has established stringent standards for the training and certification of individuals wishing to use these registered pesticides in the United States. However, the U.S. exports tens of millions of pounds of these pesticides each year to countries where such training may not be required and warning labels may not be followed.

- Chloramphenicol is an extremely potent antibiotic used in the United States only against typhoid fever and a few other life-threatening infections because of its serious potential side effects, such as aplastic anemia. The FDA indicated in Congressional testimony that an American firm had labelled and exported it to Spanish-speaking countries as suitable for treatment of much more routine disease for which there had been no substantiation of its effectiveness, including measles, mumps, and chicken pox, with no warnings as to its dangerous side effects.

- Depo-Provera, a drug that can be used legally in 69 countries (though not in the United States) as an injectable contraceptive, is supplied for contraception by an American drug firm from overseas manufacturing sites. According to FDA, it is approved for use in the United States only for palliative treatment of endometrial cancer, because there is evidence that it may be linked to long-term risks of other cancers. The drug is produced in this country only at dosage levels that are not effective for contraception. Currently, it may not be exported for



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contraceptive use. Several foreign government representatives have asked for U.S. approval of the drug as a contraceptive so it can be used in AID programs for population control.

- Manually collimated X-ray machines are not approved for use in the United States because their operation can result in patients' being overexposed. However, according to FDA testimony before Congress, these machines could provide substantial medical benefits to underdeveloped countries lacking the equipment or personnel required to maintain more complex machines. They can be exported under current law if the exporter obtains the approval of the FDA and the importing country for the shipment.

Besides the concerns about health and safety effects of hazardous substances exports on foreign citizens, effects on our own citizens are also a cause of concern. Export of hazardous substances can have a direct effect on U.S. citizens by more than one route: through adverse effects on workers in the plant where the product is manufactured; through the reimportation of the original substances or their traces or derivatives; through the illegal diversion into domestic commerce of restricted products originally produced for export; or through transport of hazardous substances back to this country via the air or oceans. The world environment itself could suffer through release of hazardous substances to the global commons.

A General Accounting Office report concluded that many kinds of imported foods may be contaminated with pesticides not allowed in the United States. FDA spot checks (examining about 1 percent of shipments) of imported raw agricultural commodities found that about 3 percent of the shipments tested in 1977 through 1979 contained residues of pesticides for which no U.S. tolerance levels exist. According to the GAO report, test results showing unacceptable residue levels are sometimes received after the item tested has already entered the marketplace. Moreover, the vast majority of imported foods enter the United States with no testing for toxic residues. Pesticides banned in the United States but used in other countries, especially nearby countries like Canada and Mexico, can also travel by water or air to enter the environment of the United States.

Several factors suggest that the problem of hazardous substances exports is likely to increase over the next several years. Growth in world population, especially in developing

countries, will put a strain on global resources. Significant health and food supply problems may follow, leading to increased foreign demand for imported drugs, pesticides, and other potentially hazardous products. Moreover, continued new discoveries of carcinogenic and other damaging effects of many substances are probable over the next few years. In some cases, certain firms may be left with stocks of materials which can no longer be sold in the United States, and the incentive to recover some of their investment by selling in products abroad may be considerable.

If current economic trends continue, exports are likely to increase. In 1970, total U.S. exports of goods and services were \$62.5 billion or 8.4 percent of gross national product. By 1978, the percentage had risen to 9.7 percent and the dollar value was \$205 billion. Yet the

U.S. balance of trade has deteriorated, and pressure for U.S. firms to increase exports has mounted. The National Export Policy, recommended by the President's National Export Policy Task Force provides new economic incentives for export. Importing countries may improve their ability to assess the effects of imports and exclude those they consider damaging. Nevertheless, it appears that the problem of hazardous substances exports will remain serious.

### IV. Existing Statutory Authority and Procedures

#### A. Summary of Existing Authority

The following agencies have been directed by Congress to regulate the domestic manufacture, use, and introduction in interstate commerce of certain products or substances that may involve hazards to human health and the environment.

| Agency <sup>1</sup>                           | Product class                                                                                                                              | Statute                                                                                       |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Consumer Product Safety Commission            | Consumer products<br>Fibro-type products<br>Household chemical substances, e.g.,<br>if toxic, corrosive, flammable,<br>children's articles | Consumer Product Safety Act,<br>Flammable Fabrics Act,<br>Federal Hazardous Substances Act    |
| Drug Enforcement Administration               | Drugs (narcotics and dangerous<br>drugs)                                                                                                   | Controlled Substances Act                                                                     |
| Environmental Protection Agency               | Pesticides                                                                                                                                 | Federal Insecticide, Fungicide, and Rodenticide Act; Federal Food, Drug and Cosmetic Act      |
| Food and Drug Administration                  | Chemical substances<br>Foods, drugs, cosmetics, and medical<br>devices                                                                     | Toxic Substances Control Act,<br>Federal Food, Drug and Cosmetic Act                          |
| U.S. Department of Agriculture                | Biological and electronic products<br>Meat and meat products<br>Poultry                                                                    | Public Health Service Act,<br>Federal Meat Inspection Act,<br>Poultry Products Inspection Act |
| Occupational Safety and Health Administration | Workplace hazards and workplace<br>equipment                                                                                               | Occupational Safety and Health Act                                                            |

<sup>1</sup> The Customs Service of the Treasury Department assists some of these agencies in enforcement.

While many of the statutes listed above address the export issue in some measure, there are no consistent principles underlying their various mandates. If any generalization is warranted, it is that Congress seems recently to have moved away from extremes—complete permissiveness on the one hand and rigid controls on the other—toward a middle course that calls for notification, disclosure, and, in limited circumstances, bans on exports of hazardous substances (see Appendix A for more information on the provisions of these statutes).

Since the mid-1970s, Congress has put increasing emphasis on notification to the receiving country of the export of banned and significantly restricted substances. Such notification was required by the Toxic Substances Control Act of 1976 and amendments to

four existing statutes passed in 1978 by the 95th Congress. These amendments strengthened existing notification procedures of the Federal Insecticide, Fungicide, and Rodenticide Act and established notification requirements for consumer products under the Consumer Product Safety Act, the Flammable Fabrics Act, and the Federal Hazardous Substances Act. Also, Congress authorized limited discretionary export banning authority, to protect U.S. consumers, under the same three acts. These recent actions suggest that there is a growing concern in Congress about the effects of exports of hazardous substances on foreign citizens, combined with the view that it is generally appropriate for countries to make their own judgments about their needs for hazardous substances, so long as they are adequately informed.

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The provisions of existing statutes pertaining to export of substances which are banned or significantly restricted in the United States are of five general types, although some statutes fit more than one category. In addition there are a good many qualifications and exceptions in the laws. As the following outline shows, the regulatory scheme is complex.

(1) *Substances for which there are no export limitations or for which exports must be in accord with the laws of the importing nation:*

Federal Food, Drug and Cosmetic Act—adulterated or misbranded foods (except meat and poultry subject to controls), cosmetics, drugs, and antibiotics.

Public Health Service Act—noncomplying electronic products.

Federal Insecticide, Fungicide and Rodenticide Act—registered pesticides composed of active ingredients for which major uses have been cancelled or suspended.

(2) *Substances for which notification of the importing country of any export is required:*

Federal Insecticide, Fungicide, and Rodenticide Act—pesticides not registered for use in the United States.

Toxic Substances Control Act—certain regulated chemical substances.

Consumer Product Safety Act—consumer products which are banned or do not meet federal safety standards.

Flammable Fabrics Act—fabric-type products which do not conform to federal safety standards.

Federal Hazardous Substances Act—toxic, flammable, corrosive and otherwise hazardous products, including children's articles which fail to meet federal requirements.

(3) *Substances for which prior approval by the importing country must be sought:*

Federal Food, Drug and Cosmetic Act—unapproved medical devices<sup>2</sup> and investigational drugs.<sup>3</sup>

(4) *Substances for which an agency can ban exports if there is a risk to health or the environment of the United States:*

Toxic Substances Control Act—chemical substances<sup>4</sup>

Consumer Product Safety Act—consumer products<sup>5</sup>

Flammable Fabrics Act—fabric-type products<sup>6</sup>

Federal Hazardous Substances Act—household chemicals<sup>7</sup>

(5) *Substances for which there is a total ban on export:*

Federal Food, Drug and Cosmetic Act—unapproved new drugs,<sup>8</sup> unapproved new animal drugs

Public Health Service Act—unapproved biological products (serums, vaccines, etc.)

Meat Inspection Act—meat failing to meet U.S. quality standards (except for preservation)

Poultry Products Inspection Act—poultry failing to meet U.S. standards.

A more detailed summary of the authority contained in the various regulatory statutes for each product appears in Appendix A.

It is not surprising that the export provisions of the various regulatory statutes are not consistent in their treatment of the export of hazardous substances. These laws were enacted over a period of 40 years. In addition, considering the different hazards involved in the various product categories, the various circumstances in which the products are shipped, and the different conditions of use of the products, some variation in the treatment of different products is perhaps warranted.

This is not to say that more consistency in the treatment of hazardous substance exports is not desirable or achievable. For example, where federal agencies provide notification of export to a foreign government, it would be desirable to systematize the procedures to assure more regularity in the process. Additional steps, described later in this report, could be taken to make product hazard information and data more readily available and accessible. Finally, there are some circumstances, also discussed afterward, under which any export of a banned or significantly restricted substance may be undesirable and not in the national interest.

In addition to the laws regulating specific products or practices, two additional authorities are relevant to export policy.

First, the Export Administration Act of 1979 (Pub. L. 96-72) authorizes the

President to use export controls to restrict the export of goods and technology where such export might prove detrimental to the national security of the United States; restrict export where necessary to prevent the excessive drain of scarce materials from the United States or to reduce the serious inflationary impact of foreign demand; and restrict export where necessary to further significantly the foreign policy of the United States or to fulfill its declared international obligations. This recently enacted statute extends and revises the Export Administration Act of 1969.

Second, Executive Order No. 12114, issued by President Carter on January 4, 1979, requires that agencies analyze the environmental effects abroad of certain types of major Federal actions that may significantly affect the environment. This analysis will help guide decisions by the responsible agency officials. However, the grant or denial of an export license under the Export Administration Act is not considered a major Federal action for the purposes of Executive Order No. 12114.

### B. Present Export Procedures

Present agency procedures dealing with the export of hazardous substances may be described in two categories: (1) procedures to implement specific control authorities and (2) mechanisms to promote international cooperation in the analysis and exchange of hazard data and to develop common approaches to regulation.

1. *Procedures to Implement Existing Control Authority:* Most agencies have in place administrative procedures which could be adapted to carrying out a more consistent export policy for banned and severely restricted hazardous substances. This is particularly true of agencies with long established responsibilities in the export area. The Commerce Department has well established procedures for imposing export controls for the various purposes specified in the Export Administration Act. The State Department has formal procedures for the cases where it is required by statute to transmit notifications regarding hazardous exports from U.S. regulatory agencies to foreign governments. Customs has long-established procedures for controlling the entry of goods into international commerce, such as checking for required export licenses and documents, which could be adapted to the needs of an export policy for banned and severely restricted hazardous products. FDA has in place under its various statutory authorities procedures for approving exports, as

<sup>2</sup>Non-complying banned products cannot be exported unless the HHS Secretary determines that export is not contrary to public health and safety and the foreign government approves of the export.

<sup>3</sup>Export is permitted if requested by the foreign government.

<sup>4</sup>Banning is authorized if the exported product presents an unreasonable risk of injury to health within the U.S. or to the environment of the U.S.

<sup>5</sup>Banning is authorized if exported product presents an unreasonable risk of injury to consumers within the U.S.

<sup>6</sup>A bill (S. 1075) has passed the Senate which would allow export if the approval of the importing country were obtained and the HHS Secretary determined that the export would not be contrary to public health.

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well as for notifying foreign governments of significant regulatory decisions and changes in statutes or regulatory approaches. In the case of agencies with new statutory authorities—EPA for the Toxic Substances Control Act and Federal Insecticide, Fungicide and Rodenticide Act and CPSC for the various laws it administers—new formal procedures either are currently in place or soon will be.

**2. Existing Programs to Foster International Exchange of Hazard Data and Consistent Approaches to Regulation and Export of Hazardous Substances:** The U.S. government is participating in several programs to promote international cooperation on control of hazardous substances and their export. The programs seek to improve exchange of information, to broaden understanding of common regulatory issues, and to develop consistent approaches where feasible.

The locus and subjects of such international initiatives include:

- **Organization for Economic Cooperation and Development (OECD):** exchange of information on regulation of pesticides and other toxic chemicals; development of consistent testing methods and control practices for chemicals; possible controls over the export of unsafe consumer goods; study of export policy needs for chemicals.

- **United Nations General Assembly (UNGA):** Resolution requesting the Secretary General in cooperation with the United Nations agencies and bodies concerned, especially the World Health Organization, to assist governments to exchange information on banned hazardous chemicals and unsafe pharmaceutical products. A report is to be submitted to the General Assembly at its 35th (1980) session, through the Economic and Social Council about the experience of Members States and United Nations agencies and bodies concerned.

- **World Health Organization (WHO, a UN body):** dissemination of methodologies to study the human health effects of chemicals and evaluate risks; development of environmental health criteria for various toxic substances; intergovernmental cooperation of international health matters.

- **Food and Agricultural Organization (FAO, a UN body):** consultation on assessing environmental hazards of pesticides and on developing consistent requirements for pesticide registration.

- **Codex Alimentarius Commission** (independent UN body established by WHO and FAO): establishment of international maximum residue limits

for pesticides in foods, to be adopted by member countries.

- **United Nations Environment Programme (UNEP):** resolutions calling for strong and consistent policies governing hazardous substances exports; development of an International Registry of Potentially Toxic Chemicals (IRPTC) to serve as data clearinghouse for all information generated on potentially toxic substances.

- **International Labor Organization (ILO):** a global occupational safety and health hazard alert system.

- **The UN Committee of Experts on the Transport of Dangerous Goods:** development of recommendations regarding classification, labeling, and packaging of hazardous materials during transport.

- **Multinational agreements:** an example, is the Tri-Partite Pesticide Agreement among the U.S., U.K., and Canada.

U.S. participation in international programs takes on still more importance as the United States implements a strong hazardous substances export policy. The "International Efforts" section VI, below, gives the Working Group's recommendations for strengthened international efforts.

### V. Policy

This section identifies considerations that must be weighed in arriving at a hazardous substances export policy and proposes and discusses a policy that balances those considerations.

#### A. Policy Considerations

The Working Group agreed on the need to establish a more consistent, practical Federal policy to govern the export of banned and significantly restricted substances. Participating agencies identified the following considerations that should be taken into account:

(1) As a nation exporting banned and significantly restricted substances, the United States has a moral obligation to recognize and assist in controlling the potential effects of these substances on the health and safety of citizens abroad and on the world environment.

(2) Nations differ substantially in their economic and cultural conditions and in their use of, and need for, hazardous substances. It is difficult for one nation to make decisions on the acceptability of risks for another nation. Such assessments require extensive information regarding economic, political, and social conditions which U.S. regulatory agencies do not have and cannot readily obtain.

(3) U.S. relations with other countries could be harmed by unrestrained export

of substances which are banned or significantly restricted in the United States.

(4) The unrestrained export of hazardous products could undermine confidence of foreign buyers in U.S.-made goods, and could jeopardize their sale abroad.

(5) Excessively restrictive limitations on the export of products which a foreign country may decide it needs could place U.S. firms at a competitive disadvantage and harm U.S. relations with the government of that country.

(6) Excessively restrictive limitations could also place significant economic burdens on the U.S. economy, including adverse effects on the balance of trade and payments, on output and jobs, and perhaps on domestic competition (if smaller firms suffer disproportionately from reduced ability to compete in foreign markets).

(7) An export policy should be administratively simple and inexpensive to implement, and should recognize the complexities of international commerce.

(8) The United States should encourage and participate actively in international initiatives to develop consistent policies for hazardous substance exports, and for the sharing of data, analysis, and information. The effectiveness of unilateral United States action could be substantially diminished if foreign facilities or firms were to become alternative suppliers of substances which U.S. policies seek to control.

(9) The United States should attempt to protect American citizens against the dangers to their health and safety of importing hazardous substances and their derivatives or residues, and of damage to the world environment.

#### B. Proposed Policy

The Working Group recommends a policy that includes the considerations listed above and that also recognizes and uses the expertise of individual regulatory agencies. The proposed policy relies on existing statutory authority and would be further implemented through formal Executive action. The Executive action would set forth the *minimum* requirements that all agencies would be obliged to meet. Agencies would be expected to adopt more stringent requirements where required by statute or where authorized and appropriate for the types of hazards within their jurisdiction.

(1) **Hazard Notification:** The Working Group concluded that in most circumstances the international responsibilities of the United States could be met by an effective hazard notification system. Existing law



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requires notification tied to actual shipment (either first shipment of the year or shipment-by-shipment) or intent to export for most categories of products included in this policy. Exceptions include foods, cosmetics, and radiation-emitting electronic products which do not meet FDA health and safety standards; approved drugs and antibiotics which do not meet FDA quality control standards; and registered pesticides made from active ingredients for which major uses have been suspended or cancelled in the United States.

Most of the laws requiring notification, including those contained in the Consumer Product Safety Act, the Federal Hazardous Substances Act, the Flammable Fabrics Act, and the Federal Insecticide, Fungicide, and Rodenticide Act, are less than 2 years old; some of the regulations implementing them are not yet final, and those in effect are very recent. The notification schemes in the various laws differ in terms of timing, frequency, and content of the notice, and experience with them is minimal. Accordingly, the Working Group is not able at this point to recommend the best scheme for notification.

The Working Group does not recommend any changes in existing law at this time. As we gain experience with the requirements of present laws, the Administration will assess their effectiveness, any important omissions they may have left, and any burdens they may impose. The Administration will then work together with Congress to determine whether notification requirements should be imposed where they are not now required and whether existing notification requirements should be modified.

Notification systems are intended to allow a foreign government to decide for itself whether the potential benefits of a substance are worth the anticipated risks and detriments. With this knowledge, a foreign government would be in a position to limit the importation of a particular hazardous substance or take other measures to protect its citizens, if it decides any of these limitations or measures would be in its national interest.

The Working Group agreed that there was a need for greater procedural uniformity in the notification process as used by Federal agencies. It would be more effective and more efficient, for the United States and for other countries, to establish an official government-to-government contract for transmission of information concerning hazardous substances.

The Working Group recommends that the State Department be designated the

official conduit of notifications concerning exports of banned and significantly restricted hazardous substances for all Federal agencies. This recommendation is consistent with the Department's role as official U.S. representative to foreign governments. Each agency would list for the State Department its own offices and people to be contacted if a foreign government wanted further information about regulatory actions or hazardous substances risks. Agencies should also work with the Department to identify their opposite numbers in foreign governments, to receive notifications and to serve as points of contact. The State Department would transmit notifications to the U.S. embassy in the country in question and might also transmit them to the country's embassy in the United States. U.S. embassies in foreign countries would keep on file copies of notifications transmitted to host governments. If a foreign government is required under any existing notification system to respond to a notice, that response should be transmitted through the State Department to the relevant U.S. regulatory agency.

Individual agencies would still be free to communicate directly with their counterparts in a foreign government if they wished, and would of course do so where required by law.

In addition to greater uniformity in procedure, it is also desirable to achieve greater uniformity in the content of the notices sent to foreign governments. The Working Group recommends that the information to be provided by the State Department to the foreign government include, at a minimum:

(a) The name of the hazardous substance to be exported;

(b) A concise summary of the agency's regulatory actions regarding that substance, including the statutory authority for such actions and the timetable for any further actions that are planned; and

(c) A concise summary of the potential risks to human health or safety or to the environment that are the grounds for the agency's actions.

In addition, to the extent deemed appropriate by the agency with jurisdiction, copies of additional documents could be forwarded to a foreign country to assist that country in its assessment of the risks associated with the substance. Trade secret data would not be sent to the foreign country except as authorized by domestic statute and deemed appropriate by the agency with jurisdiction.

(2) *Annual Summary*: As a complement to the notification scheme

that is already in effect, the Working Group recommends the preparation and distribution of a report which:

(a) Summarizes all final regulatory actions of the types described in Section VII<sup>1</sup> that were taken by federal agencies by the end of the previous calendar year (including those antedating that calendar year by continuing in force) and that are of significant international interest;

(b) Summarizes all proposed regulatory actions of the types described in Section VII that were pending before agencies at the end of the previous calendar year and that are of significant international interest; and

(c) Indicates generally what kind of additional information is available with respect to each of these final or proposed regulatory actions and how the information may be obtained.

The report would also include information on some substances the use of which is generally permitted in the United States, subject to conditions or restrictions based on potential risks to human health or safety or to the environment. For example, the Occupational Safety and Health Administration, under the Occupational Safety and Health Act, issues health standards that set maximum workplace exposure levels for certain chemicals and other substances, and establishes other requirements for worker protection. Similarly, the Environmental Protection Agency issues regulations governing the use of some pesticides. Such regulations should be included in the Annual Summary when they are likely to be of interest to other countries in protecting against similar hazards.

The report would be compiled by the Regulatory Council and distributed by the State Department to appropriate foreign officials and to public and private international organizations. (The latter would include such organizations as the UN Environment Programme, OECD, FAO, World Health Organization and the ILO.) Each agency would provide the Regulatory Council with the information requested in a standard format and on a timetable determined by the Regulatory Council. The report would also be published in the United States in the *Federal Register*.

The annual summary would serve several important purposes. It would compile in one up-to-date document a summary of U.S. regulatory actions banning or significantly restricting the

<sup>1</sup>Information on unregistered pesticides would be included in the Annual Report only if EPA suspends, cancels or denies registration or if a tolerance is denied or revoked.



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manufacture, production, use, or sale of hazardous substances. It would inform foreign governments of regulatory actions the previous year that were not included in the last annual report, and for which some governments would not have received a shipment notification. It would give foreign governments notice of prospective regulatory actions so they could monitor the progress of a proceeding if they so desired. Furnished with this information, a foreign government could take regulatory action it deems appropriate at the same time that U.S. regulatory action takes place. The report would also list people and offices in the United States to approach for discussions of hazards of particular substances. The summary would also serve as a "hazard alert" for foreign governments on products that it may be importing from other countries.

(3) *Export Control*: The Working Group concluded that the responsibilities of the United States concerning the export of hazardous substances would be fulfilled in most cases through notification. There are some limited circumstances, however, where additional safeguards are needed to assure good and stable relations with other nations in the world community. If the United States does not exercise special vigilance over the export of some banned or significantly restricted products which are particularly hazardous, our economic and diplomatic ties with other countries could be jeopardized. Citizens and governments of foreign countries receiving these products directly, or being adversely affected indirectly as innocent bystanders, may develop increasingly hostile attitudes towards this country and its products.

As indicated in Section IV, existing law already prohibits the export of some substances in particular circumstances. Another mechanism that can be used to prohibit hazardous exports where such exports would prove detrimental to the foreign policy interests of the United States is the Export Administration Act of 1979 (Pub. L. No. 96-72, 93 Stat. 503, 50 U.S.C. App. § 2401 *et seq.* (the Act)). The Act authorizes the President to " \* \* \* prohibit or curtail the exportation of any goods, technology, or other information subject to the jurisdiction of the United States or exported by any person subject to the jurisdiction of the United States, to the extent necessary to further significantly the foreign policy of the United States or to fulfill its declared international obligations." (Sec. 6(a)(1)). The authority contained in this subsection is to be exercised by the Secretary of Commerce, in consultation

with the Secretary of State and such other departments and agencies as the Secretary considers appropriate, and is to be implemented by means of export licenses issued by the Secretary.

The Export Administration Act of 1979 is the successor statute to the Export Administration Act of 1969. By memorandum dated January 30, 1979, Deputy Assistant Attorney General, Office of Legal Counsel, Leon Ulman advised the Department of Commerce that the 1969 statute gave the President authority to control exports of hazardous substances for foreign policy purposes. On January 9, 1980, the Working Group inquired as to whether this authority was modified in the 1979 statute. Deputy Assistant Attorney General Ulman advised the Working Group, by memorandum dated April 11, 1980, that the President may control the export of hazardous substances to further significantly the foreign policy of the United States under the 1979 statute.

The Working Group recommends that the Secretary of Commerce require a validated export license for those prohibited and significantly restricted products which, if exported, would prove detrimental to the foreign policy interests of the United States. The products on which such export controls would be imposed would be chosen in the following manner. First, the appropriate regulatory agencies would prepare lists of substances, products, and classes of products which have been banned or significantly restricted in the United States under the specific statutory authorities listed in Section VII. These prohibited and restricted substances, with the exception of certain unregistered pesticides \* and "medicines and medical supplies" as the term is used in the Act, <sup>10</sup> would constitute the universe from which those substances to be subjected to export controls would be chosen. No substance which is not already prohibited or

significantly restricted for use in the United States would be considered for export controls under this policy.

Next, these lists of substances and products would be brought before an interagency task force chaired by the State Department and composed of the Department of Commerce, the Environmental Protection Agency, the Consumer Product Safety Commission, the Food and Drug Administration, the Office of the United States Trade Representative, and the Council on Environmental Quality. The State Department, as chair of the task force, could invite representatives of other Federal agencies as well to participate from time to time in the work of the task force. This task force would advise the State Department as to which of the listed substances should be considered, because of the especially severe hazards that their export would pose to human health or safety or to the environment, candidates for inclusion on the Commodity Control List. In doing so, the task force would consider, to the extent possible within the limits of available information, the type, extent, and severity of the potential detrimental effects of each substance proposed for inclusion on the Commodity Control List by a member of the task force; the likelihood of the effects; the duration of the effects; the ability of foreign countries to avoid or mitigate the effects; the availability of the substance from sources other than the United States; the availability of other substances or methods that would serve the same purpose as the substance to be exported; and the importance of the beneficial uses of the substance (this is not intended to require a rigorous, quantitative analysis of costs and benefits, however, as is usually performed in domestic regulatory procedures).

The function of the regulatory agencies on the task force would be to provide technical advice to the State Department, on the basis of available information compiled in the course of previous regulatory proceedings pertaining to the substance or product; and to assure that those products for which a recommendation of restricted export is made all pose a common, especially severe, level of hazard. The task force would be a continuing one which would review additional substances and suggest new candidates for the Commodity Control List as new actions of the type defined in Section VII are taken. With the benefit of advice obtained from the interagency task force, the State Department would identify, subject to the concurrence of

\* The full text of the 1980 memorandum appears in Appendix B.

<sup>10</sup> Pesticides for which registration has never been sought would not generally be included in this universe of products since U.S. regulatory agencies would not necessarily possess any test data on their health or safety ramifications. However, pesticides for which a tolerance has been denied or revoked would be included in the universe for the purpose of consideration for export controls. In this way, some unregistered pesticides might be placed on the list for consideration. For example, the unregistered pesticide Leptophos would appear on the list (were it still being manufactured), because EPA denied a tolerance for residues on foods (under authority of Sec. 408 of the Food, Drug, and Cosmetics Act).

<sup>11</sup> The Working Group has asked the Office of Legal Counsel of the U.S. Department of Justice for a legal opinion as to the particular classes of products regulated by FDA which are covered by this term as used in the Export Administration Act.

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the Secretary of Commerce, those relatively few banned or significantly restricted substances which should be included on the Commodity Control List because controls on their export would further significantly the foreign policy of the United States or would fulfill declared international obligations of the United States.

In the event that the State and Commerce Departments disagreed over the imposition of export controls, the disagreement would be referred to the President as provided in the Act.

The Act mandates a number of procedural and substantive requirements which must be met when invoking foreign policy controls. The President may impose export controls "only after full consideration of the impact (of such controls) on the economy of the United States" (sec. 3(2)) and only if the foreign policy standard is satisfied (sec. 3(2)(B)). Where the controlled goods or technology are comparably available from foreign sources, he may impose controls only after he "determines that adequate evidence has been presented to him demonstrating that the absence of such controls would prove detrimental to the foreign policy or national security of the United States." Sec. 4(c). Furthermore, the President is obligated to initiate negotiations with foreign governments to eliminate foreign availability of goods or technology comparable to those subject to U.S. controls (Sec. 6(g)). Export controls maintained for foreign policy reasons expire one year after their imposition, unless extended by the President.

In addition, the Act specifies several preconditions to the imposition of foreign policy controls. The President must determine that reasonable efforts have been made to achieve the purposes of the controls through negotiations or other alternative means" Sec. 6(d). The President must "in every possible instance . . . consult with the Congress before imposing any export control . . ." Sec. 6(e). The Secretary of Commerce must "consult with such affected United States industries as the Secretary considers appropriate, with respect to . . . (criteria 1 and 4 listed below)" Sec. 6(c).

Section 6(b) of the Act also requires that the President consider the following criteria "when imposing, expanding, or extending foreign policy controls:

"(1) The probability that such controls will achieve the intended foreign policy

purpose, in light of other factors, including the availability from other countries of the goods or technology proposed for such controls;

"(2) The compatibility of the proposed controls with the foreign policy objectives of the United States, including the effort to counter international terrorism, and with overall United States policy toward the country which is the proposed target of the controls;

"(3) The reaction of other countries to the imposition or expansion of such export controls by the United States;

"(4) The likely effects of the proposed controls on the export performance of the United States, on the competitive position of the United States in the international economy, on the international reputation of the United States as a supplier of goods and technology, and on individual United States companies and their employees and communities, including the effects of the controls on existing contracts;

"(5) The ability of the United States to enforce the proposed controls effectively; and

"(6) The foreign policy consequences of not imposing controls."

In addition to consulting with Congress, the Act requires that when controls are imposed, expanded or extended, the President "shall immediately notify the Congress of such action and shall submit with such notification a report . . ." The report must (1) specify "the conclusions of the President" with respect to each of the six criteria discussed above; (2) specify "the nature and results of any alternative means attempted . . . or the reasons for imposing, extending, or expanding the control without attempting any such alternative means"; and (3) indicate "how such controls will further significantly the foreign policy of the United States . . ." (Sec. 6(e)).

The Secretary of Commerce has statutory authority, or the President has delegated to the Secretary, the responsibility for meeting many of the above requirements.

Once all of the above requirements for imposing export controls have been met and a hazardous substance has been placed on the Commodity Control List, an exporter must apply to the Commerce Department for a validated license before it can export that substance. The Act sets forth specific statutory deadlines for processing applications. The Department of Commerce would make the decision on whether to grant the license in consultation with the Federal agency with domestic regulatory authority, the State Department, and any other relevant agency.

Historically, the Commerce Department has rarely, if ever, granted licensees over State Department objections. In this context, Commerce will continue to give great weight to State Department recommendations. The State Department would not recommend issuing a license unless it had determined that the export would not be detrimental to U.S. foreign policy interests, and that the State Department, after appropriate consultations, had received no objections to the export from the government of the foreign country to which the banned or significantly restricted product is being sent. The State Department's determination and findings would be conveyed in writing to the Commerce Department. The State Department would instruct its personnel at missions and embassies in foreign nations to be prepared to carry out such consultations. Embassy personnel would be instructed to identify an official of the foreign government with whom to consult on proposed hazardous export shipments. When a validated export license is sought for a substance added to the CCL under this policy, a U.S. embassy official in the country of destination would apprise the foreign government official of the nature of the product, quantity to be shipped, the regulatory action which prohibited or significantly restricted its sale in the United States, the potential risks to human health or the environment which were the basis for the action, and such other information as is deemed appropriate (provided that the confidentiality of trade secret information would be maintained as required by law).

Other factors to be considered by the Commerce Department in acting on an application for a validated export license might include: the type of hazardous substance, the destination of the export; the proposed use to which the product would be put; whether the foreign government is the importer; the nature and type of hazards involved; the number of people potentially affected by the hazard; the benefits to be gained by the export (again, this would not be a rigorous, quantitative analysis of costs and benefits); the availability of alternative sources of the substance; the availability of non-hazardous alternative; precautions the importer will take with the substance; the dangers inherent in alternative substances presently being used; the effect the substance might have on neighboring countries; the potential reaction of other countries; results of consultations with industry

<sup>11</sup> The legislative history of the Act indicates that these criteria are to be taken into consideration, but they are not conditions which must be met. See Appendix B for further discussion.

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representatives and other concerned parties; and the results of international efforts to curb the export of the substance. Actual experience evaluating applications may reveal other factors that should be considered. The Commerce Department would propose and receive comment on regulations governing its consideration of applications for export licenses for hazardous substances.

The Working Group believes that the economic consequences of invoking export controls would not be great. The categories of products which would be candidates for Commodity Control List are well defined (see Section VII) and readily identifiable. The number of substances which would be chosen for the CCL is expected to be small. In addition, it is quite possible that a U.S. firm may have or could develop a substitute product offering the same benefits without posing severely hazardous risks.

(4) *Evaluation:* Considering the importance of an effective policy for export of hazardous substances, and recognizing that experience with such a policy is lacking, the Working Group considered it essential to evaluate from time to time how well the policy is working in practice. The Working Group recommends that the President be provided a progress report 18 months after the effective date of the policy, and annually thereafter. The report would be prepared jointly by the Council on Environmental Quality, the Department of State, and the Department of Commerce in consultation with other affected agencies.

The report would summarize agency activities under the policy, evaluate the effectiveness of the hazardous substances export policy, and make any recommendations that are deemed appropriate.

(5) *Government-Sponsored Exports:* All the policies discussed so far apply to exports by private commercial firms. Somewhat different considerations apply to products which the U.S. government itself buys and distributes abroad, mainly for the purpose of assisting economic development in other countries. The Working Group expects and recommends that the U.S. government, in its own dealings with export of hazardous substances, maintain the highest standards of good judgment and scrupulous care for the health and welfare of foreign citizens and their environment.

Environmental review by which government agencies look at the consequences of a proposed action before undertaking it, and analyze reasonable alternatives, is a good model

for government dealings with hazardous exports. In fact, such an approach has been tried and worked well. In the early 1970s, the Agency for International Development (AID) distributed abroad some pesticides which were not approved for use in the United States (Leptophos, DDT for other than public health uses). Following a lawsuit, AID reexamined its entire pesticide program, writing a comprehensive environmental impact statement that looked at consequences and weighed alternatives. AID no longer purchases or distributes abroad pesticides that are banned for use in the United States, except for compelling reasons and after very careful examination. The AID pest control program now emphasizes alternatives such as integrated pest management.

The Working Group recommends the same approach of program assessment and analysis of alternatives for other programs that may involve the distribution abroad of hazardous substances. For example, population programs that are a part of U.S.-assisted development efforts should be carefully scrutinized, to ensure that the birth control drugs and devices bought with U.S. government funds are as safe and effective as possible. The program assessment should be concerned with more than the simple avoidance of products that have already been banned, through lengthy legal proceedings, for use in the United States. It should also be sensitive to the likely circumstances of use in the country of destination. For example, if a birth control drug is known to interfere with vitamin metabolism, or if safe application of a birth control device requires special medical skills, these facts should be carefully considered before the U.S. government provides the funds to export such products to countries where women are likely to be malnourished, or medical skills are scarce.

Similar considerations apply to mother-child nutrition programs. Infant formula that is safe and convenient to use in the United States may be fatal if used in places with impure water supplies. Program assessments and the decisions based on them should take such factors into account.

Responsible, well-informed decisions by U.S. government agencies related to shipments of hazardous substances abroad might serve as a model for other countries and for private traders.

(6) *Labeling of Hazardous Exports:* The Working Group recommends that regulatory agencies give continuing attention to improvements in labeling, as a technique for dealing with

hazardous exports. In some cases, it may be possible to develop simplified, more readily understandable labels. Agencies may also want to consider new requirements that pesticide, drug and toxic substance labels on exported products include more information on the nature of possible hazards associated with their use. The Administration might propose legislation, if appropriate, to impose such requirements.

### VI. International Efforts

Unilateral actions should be just one part of a broader U.S. program to promote international cooperation on trade of hazardous substances throughout the world. The Working Group recommends that the President direct the State Department and other federal agencies in consultation with the State Department to seek international agreement in these areas:

- Notification of the export of hazardous substances;
- Comprehensive adoption of uniform, readily understandable hazard labeling for substances in international commerce;
- Improved worldwide hazard alert systems and clearinghouses for information on health and safety risks in the workplace;
- Other common standards and practices related to the export of hazardous substances.

These steps could lead to the formulation of an international convention governing hazardous substances exports.

A common international effort is important for several reasons. Common policies governing hazardous exports, subscribed to by all countries, would help to assure that U.S. multinational firms located abroad or firms in other nations would not become alternate suppliers for hazardous substances. Consistency among nations in hazard notification and labeling would be more effective than widely varying national programs, because more hazards would be covered and the procedures would be more universally understood; more accurate, because it would be based on broad international experience; and less burdensome to industry, because firms would not have to respond to multiple varying requirements. Moreover countries like the United States that take responsibility for hazardous exports would not be penalized economically.

Through international cooperation, ongoing technical assistance programs should focus on helping developing countries to establish adequate standards for health and safety,



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competent regulation, and effective use of available hazard information. The United States committed itself to such bilateral efforts when it signed the Multilateral Trade Negotiations Agreement on Technical Barriers to Trade (Standards Code) in December, 1979. Differences among countries in needs and desires for assistance should be recognized in shaping these programs. International cooperation will more likely flourish if it is built on existing structures, and is mindful of resource constraints that affect the ability of developing countries to contribute to the effort.

Targeted technical assistance to countries which are increasing their importation, manufacture and use of chemicals would greatly enhance the policy's chances of success. The Working Group recommends that appropriate agencies consider possibilities for technical assistance under present legal authorities, and adopt changes to make present programs more effective. In this connection, the Department of Commerce should investigate opportunities for the Bureau of the Census to monitor exports of hazardous substances, to serve as the basis for better notification and targeting technical assistance.

The Working Group recommends continued participating by the United States in the international efforts listed in Section IV. The Group encourages increased activity by the UNEP Committee on Toxic Chemicals, the WHO International Program on Chemical Safety, and the OECD. The OECD has begun considering approaches to the control of toxic substances and export of hazardous products. OECD membership includes the major non-Communist industrialized nations; these nations are responsible for the bulk of hazardous substances trade. OECD is an excellent forum for exchange of information and technology among member countries, and for consideration of export notification and control policies. However, OECD is not so useful as a clearinghouse for communication with less developed countries, which are often importing countries and are thus greatly interested in and affected by policies concerning trade in hazardous substances. OECD should be encouraged to cooperate with UNEP, or to include by other means a broader array of nations in conducting deliberations on these matters.

U.S. resources to be devoted to international health and safety cooperation merit careful consideration and budget review. The success of the

effort would depend to a significant extent on U.S. leadership, plus financial support and cooperation from other major industrial countries.

The proposals described above, together with the other recommendations in this report, are an important first step toward the control of hazardous substances in international trade. The adoption of a U.S. policy that includes notification, export controls in limited circumstances, careful assessment of exports by U.S. government agencies, and efforts to reach international agreements on controls over hazardous exports will put the United States in a position of world leadership in the field. Through such domestic and international policies, the United States will be in a strong position to persuade other industrialized nations to control the distribution of hazardous products throughout the world. This leadership role is, we believe, consistent with the President's human rights themes and will enhance our trading position.

### VII. Substances Covered by the Policy

As discussed in Section II, this policy would cover substances which are banned or significantly restricted in the United States because of the threat they pose to public health and safety or the environment. It would thus apply to substances and products regulated under certain sections of FIFRA, TSCA, FDCA, PHSA, CPSA, FHSA and the Flammable Fabrics Act. The Working Group has specifically defined the policy as covering the following substances and products, all of which are banned or significantly restricted in the United States:

(a) A food or class of food which:

(1) Is adulterated, as defined by rules issued under Sec. 402 (a) or (c) (21 U.S.C. 342 (a) or (c)).

(2) Is in violation of emergency permit controls issued under Sec. 404 (21 U.S.C. 344).

(3) Contains a poisonous or deleterious substance which exceeds a tolerance or action level issued under Sec. 406 (21 U.S.C. 346), or

(4) Contains an unsafe food additive within the meaning of Sec. 409 (21 U.S.C. 348) of the Federal Food, Drug, and Cosmetic Act;

(b) A drug which is:

(1) Adulterated, as defined by rules or orders issued under Sec. 501 (a), (b), (c), or (d) (21 U.S.C. 351 (a), (b), (c), or (d)).

(2) Misbranded, as defined by rules or orders issued under Sec. 502(j) (21 U.S.C. 352(j)), or

(3) A new drug for which an approval is not in effect under Sec. 505 (21 U.S.C.

355) of the Federal Food, Drug and Cosmetic Act;

(c) an Antibiotic drug which has not been certified as required under Sec. 507 (21 U.S.C. 357) of the Federal Food, Drug and Cosmetic Act;

(d) A drug containing insulin which has not been certified as required under Sec. 508 (21 U.S.C. 358) of the Federal Food, Drug and Cosmetic Act;

(e) A device which:

(1) Is adulterated, as defined by rules or orders issued under Sec. 501(a) (21 U.S.C. 351(a)).

(2) Is misbranded, as defined by rules or orders issued under Sec. 502(j) (21 U.S.C. 352(j)).

(3) Fails to comply with a performance standard issued under Sec. 514 (21 U.S.C. 360d).

(4) Has not received premarket approval where so required by rules issued under Sec. 515 (21 U.S.C. 360e), or

(5) Is a banned device under Sec. 516 (21 U.S.C. 360f) of the Federal Food, Drug and Cosmetic Act;

(f) A cosmetic which is adulterated as defined by rules or orders issued under Sec. 601 (21 U.S.C. 361) of the Federal Food, Drug and Cosmetic Act;

(g) A color additive in or on a food, drug, device, or cosmetic which is deemed unsafe within the meaning of Sec. 706 (21 U.S.C. 376) of the Federal Food, Drug and Cosmetic Act;

(h) A biological product which has been propagated or manufactured and prepared at an establishment which did not hold a license as required by Sec. 351 (42 U.S.C. 262) of the Public Health Services Act;

(i) An electronic product which does not comply with a performance standard issued under Sec. 358 (42 U.S.C. 263f) of the Public Health Services Act;

(j) A consumer product which:

(1) Does not comply with a consumer product safety standard adopted under Sections 7 and 9 (15 U.S.C. 2056 and 2058) other than one relating solely to labeling,

(2) Has been declared to be a banned hazardous product under Sections 8 and 9 (15 U.S.C. 2057 and 2058),

(3) Presents a substantial product hazards under Sec. 15 (15 U.S.C. 2064), or

(4) Is an imminently hazardous consumer product under Sec. 12 (15 U.S.C. 2061) of the Consumer Product Safety Act;

(k) A fabric, related material, or product which does not comply with a flammability standard (other than one relating to labeling) adopted under Sec. 4 (15 U.S.C. 1193) of the Flammable Fabrics Act;

(1) A product which is a banned hazardous substance (including a



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children's article) under Secs. 2 and 3 (15 U.S.C. 1261 and 1262) of the Federal Hazardous Substances Act:

(m) A pesticide which, on the basis of potential risks to human health, or safety or to the environment,

(1)(A) Has been denied registration for all or most significant uses under Sec. 3(c)(6) (7 U.S.C. 136a(c)(6)),

(B) Has been classified for restricted use under Sec. 3(d)(1)(C) (7 U.S.C. 136a(d)(1)(C)),

(C) Has had its registration cancelled for all or most significant uses under Sec. 6 (7 U.S.C. 136d),

(D) Has been proceeded against and seized under Sec. 13 (7 U.S.C. 136k), or

(E) Requires an acknowledgement statement under Sec. 17(a)(2) (7 U.S.C. 1360(a)(2)) of the Federal Insecticide, Fungicide, and Rodenticide Act, or

(2) For which a tolerance has been denied or revoked under Sec. 406 (U.S.C. 346a) of the Federal Food, Drug and Cosmetic Act; and

(n) A chemical substance or mixture

(1) Which is subject to an order or injunction issued under Sec. 5(f) (15 U.S.C. 2604(f)),

(2) Which is subject to a requirement issued under Sec. 6(a)(1), 6(a)(2), 6(a)(5) or 6(a)(7) (15 U.S.C. 2605(a)(1) 2605(a)(2), 2605(a)(5), or 2605(a)(7)), or

(3) For which a civil action has been brought and relief granted under Sec. 7 (15 U.S.C. 2606) of the Toxic Substances Control Act.

The number of substances and products which would be covered by this policy is limited. Under FIFRA, EPA estimates that there are less than 20 pesticide chemicals the use of which is entirely prohibited in the United States, about 15 pesticide chemicals for which major uses are prohibited, and 36 whose use is restricted by regulation (under FIFRA, Sec. 3(d)(1)(C)). (EPA also estimated on the basis of early experience with the notification process that there are perhaps 25 pesticides which are wholly unregistered in the U.S. being manufactured for export only.<sup>13</sup>) Under TSCA, two classes of chemicals (PCBs and chlorofluorocarbons) have been regulated so far, though more actions are expected in the future. Under FDCA and PHSA there are perhaps several hundred standards which prohibit sale of certain kinds of foods, drugs, cosmetics and medical products; it is not known how many products are manufactured and sold for export only which do not comply with these

standards. However, it is anticipated that few of these products would be recommended for inclusion on the Commodity Control List. Under the three statutes which CPSC administers, some 30 classes of products have been subject to standard-setting or other actions which prohibit sale in the U.S. Again, it is not certain how many products which do not comply with these requirements are exported, but early experience with notification requirements suggests that the number is quite small.

The Working Group agreed to exclude from within the purview of its recommended policy alcohol, tobacco, firearms, military weapons and equipment, narcotic and psychotropic substances, and nuclear fuel. Also excluded are the exportation of hazardous production facilities, and U.S. financial assistance for such facilities. As indicated, certain substances which may create hazardous workplace conditions are included only in the annual summary proposed as part of the policy. Finally, Export-Import Bank financing of exports would not be covered by the policy.

Alcohol, tobacco, and firearms were excluded because they are extensively controlled through the tax code and their health and safety implications are well known. The Working Group believes there is sufficient attention to and control over these products and that their exclusion does not detract from the policy review. Military weapons and equipment and narcotic and psychotropic substances were excluded because they are subject to an extensive system of national controls and agreements under international treaty obligations. Likewise, nuclear fuels were excluded because they are extensively controlled nationally and internationally.

As indicated by the criteria, substances for which most significant uses in the United States have been prohibited would be covered by the policy. In this category are products such as DDT, banned for most uses by EPA because of its serious adverse environmental effects but allowed for certain very narrowly defined uses (i.e., public health measures).

Products that are not restricted for use in the United States, but subject to unsafe circumstances for consumption abroad are not included in the Working Group's policy recommendations affecting private, commercial trade. The Working Group excluded these products with some reluctance, since there are indications that they are posing problems in certain countries. One such product is infant formula, discussed above in connection with U.S.

government actions. It appears that commercial trade involving such products might be more appropriately dealt with through such means as technical assistance or codes for industry rather than export controls.

The Working Group also excluded from consideration the export of hazardous production facilities and direct or indirect financial assistance for those facilities (for example, through the Export-Import Bank and the Overseas Private Investment Corporation). As occupational health and safety and environmental protection requirements are placed on U.S. production facilities, some firms have established new facilities in other countries with less rigorous regulatory requirements. In some cases these "runaway" facilities have been established in Mexico near the U.S. border so that they remain close to U.S. markets, with advanced freight transport systems, but they can be and are located elsewhere in the world.

Hazardous production facilities were excluded because the issues they raise and the nature of possible remedial action are quite different from those related to exports of hazardous substances. In the case of banned or severely restricted hazardous substances, there are ample precedents for export controls on products. This is not true for exports of production facilities. Only certain exported production facilities involving major federal actions abroad (as defined under Executive Order 12114) are subject to even environmental review. Often the only connection between the facility and this country is that it is owned or built by a U.S.-based firm. Any system of controls for export of hazardous facilities would require a statutory basis; this is an issue that the Congress may want to examine.

Substances causing hazardous workplace conditions as regulated by OSHA are included in one part of the Working Group's proposals. The Working Group recommends that the Annual Summary include OSHA health standards where appropriate, so that foreign governments will have the benefit of our studies and regulations to protect their own workers.

The question of how to control the export of hazardous wastes (as defined by EPA under RCRA) has not yet been resolved. EPA has promulgated stringent new regulations governing the disposal of wastes in the United States which could create increased pressure for export. Because these regulations will go into effect in the fall of 1980, resolution of this matter is urgent. The Working Group recommends that the interagency group led by State which is now

<sup>13</sup> While unregistered pesticides would be covered by certain aspects of this policy (e.g., notification as required by statute), they would generally not be candidates for inclusion on the Commodity Control List or the Annual Report on regulatory actions.

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considering the matter should make recommendations to control the export of these substances as soon as possible.

### VIII. Implementation and Enforcement

Virtually all of the policies affecting commercial trade proposed by the Working Group can be established through Executive action. To implement the policy, each regulatory agency with jurisdiction over substances subject to the policy would undertake the following:

(1) Define with particularity either the specific products or the classes of products which are banned or significantly restricted substances as defined in Section VII, for publication in the *Federal Register*. This list would be revised as necessary to reflect new regulatory actions.

(2) Prepare, on an annual basis, consistent with the format developed by the Regulatory Council, summaries of all final and proposed regulatory actions taken each year concerning banned and severely restricted hazardous substances, and indications of what additional information is available with respect to each of these final or proposed regulatory actions. In addition, in the first year, each agency would provide a listing or summary of all of its final regulatory actions with respect to such hazardous substances.

(3) Establish procedures, where notification is required under existing law, for expeditiously notifying the State Department of exports of relevant hazardous substances to foreign countries. The procedures would include timing and content of notices, recordkeeping responsibilities, provisions relating to trade secrets and confidential information, any special agency requirements in addition to those required by this policy, and provisions for enforcement.

It is not anticipated that the regulatory agencies will require additional personnel or resources to carry out these tasks. In implementing this policy, the State Department will need to enhance its ability to expeditiously provide export notifications, through its embassies, to the appropriate foreign officials, and to consult with these officials prior to the granting of a validated export license for hazardous substances on the Commodity Control List. This will require each embassy to develop accurate up-to-date directories of the foreign officials responsible for hazardous substances so that there is no delay in identifying the appropriate official when a notification is transmitted or an export license is applied for.

The Department of Commerce would have enhanced responsibilities in implementing the Export Administration Act. In order to implement certain provisions of this policy, certain hazardous substances would be added to the Commodity Control List (see Section V). The Working Group anticipates that the small number of substances so listed should not unduly burden the Department. However, some resources may need to be shifted to or added to the offices responsible for implementing this part of the policy.

The Customs Service also has authority, resources, field structure, and enforcement experience which will be needed to implement certain provisions of this export policy. Customs, through the use of Shipper's Export Declarations, enforces Commerce's greatest export licensing requirements. Customs can inspect, seize, and detain articles in violation of the Export Administration Act. Enforcement responsibility for shipment notification would be added as another element in the Customs export check.

*Esther Peterson,*

*Special Assistant to the President for Consumer Affairs and Chair, Interagency Working Group on a Hazardous Substances Export Policy.*

### Attachment A

#### Consumer Product Safety Commission

*Consumer Product Safety Act (15 U.S.C. 2051)*

**Products or Financing Arrangement:** Consumer products—articles used in and around the residence, school, or in recreation for the personal use, consumption, or enjoyment of a consumer, except tobacco, motor vehicles, pesticides, boats, ammunition, aircraft, foods, drugs, cosmetics, or medical devices. (15 U.S.C. 2052(a)(1))

**Regulatory Authority for Domestic Use:** CPSC can (1) set mandatory Federal standards for products which pose an unreasonable risk of injury; (2) ban products which pose such risk if no standard can adequately protect the public; (3) seek a court order to seize products which contain an imminent hazard; (4) order pre-market notice of new products; (5) mandate labeling and data disclosure requirements; and (6) order public notice and recall of products presenting substantial product hazards. (15 U.S.C. 2056; 2057; 2058; 2061; 2062; 2063; 2064; 2070(e))

**Regulatory Authority for Exports:** The CPSC can prohibit export if it determines that exportation of a product presents an unreasonable risk of injury to consumers within the U.S.

Any other product can be exported (except to U.S. installation outside the U.S.) if it

(1) Is manufactured or sold for export purposes and has never been distributed in the U.S., and

(2) Is labeled for export.

Thirty days prior to exporting a product which does not comply with a product safety standard or banned by rule, the exporter must notify the CPSC. CPSC notifies country of destination of the exportation and the basis of the standard or rule. CPSC may, by petition, require only 10 days notice. (15 U.S.C. 2067)

**Pending Amendments:** None.

**Federal Hazardous Substances Act (15 U.S.C. 1261)**

**Products or Financing Arrangement:** A substance which is (1) toxic, corrosive, an irritant, a strong sensitizer, flammable, combustible, or which generates pressure and which may cause substantial personal injury or illness, and (2) toys. (15 U.S.C. 1261)

**Regulatory Authority for Domestic Use:** CPSC may ban hazardous substances, require labeling, and seek a court order to seize noncomplying products, or enjoin their distribution. (15 U.S.C. 1262; 1265; 1267)

**Regulatory Authority for Exports:** CPSC may prohibit export if it determines that exportation of a hazardous substance represents an unreasonable risk of injury to persons residing within the United States. All other products can be exported if they are

(1) In a package branded in accordance with the specifications of the foreign purchaser;

(2) Labeled in accordance with the laws of the foreign country;

(3) Labeled on the shipping package as intended for export;

(4) So exported and have not previously been introduced into domestic commerce.

Thirty days prior to exporting a misbranded or banned hazardous substance, the exporter must notify CPSC. CPSC notifies country of destination of the exportation and the basis upon which the substance has been misbranded or banned. CPSC may, by petition, require only 10 days notice. (15 U.S.C. 1264(b); 1265(a); 1273(d))

**Pending Amendments:** None.

**Flammable Fabrics Act (15 U.S.C. 1191)**

**Products or Financing Arrangement:** Wearing apparel, fabrics, interior furnishings, or related materials. (15 U.S.C. 1191)

**Regulatory Authority for Domestic Use:** CPSC can set standards, issue

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cease and desist order, and seek court order to seize noncomplying products. (15 U.S.C. 1193; 1195)

**Regulatory Authority for Exports:** The CPSC can prohibit export if it determines that exportation of a product presents an unreasonable risk of injury to persons residing within the U.S.

Any other product can be exported (except to U.S. installations outside the U.S.) if it is labeled for export. (15 U.S.C. 1202)

CPSC interprets this provision so as to require the manufacturers of noncomplying goods to have the intention to export goods at the time of original manufacture. (16 CFR 1602.2)

Thirty days prior to exporting a fabric which fails to conform with a standard, the exporter must notify CPSC. CPSC notifies country of destination of the exportation and the basis of the standard. CPSC may, by petition, require only 10 days notice. (15 U.S.C. 1202)

**Pending Amendments:** None.

### Drug Enforcement Administration

#### *Controlled Substances Import and Export (21 U.S.C. 881)*

**Products or Financing Arrangement:** Narcotics and Dangerous Drugs.

**Regulatory Authority for Domestic Use:** Broad controls are provided for the transshipment of controlled substances through the United States to other countries and for their in transit shipment within the U.S. for immediate export, and for the possession of controlled substances on board any vessel, aircraft or other vehicle arriving or departing from the United States.

**Regulatory Authority for Exports:** Regulates the importation and exportation of all controlled substances—narcotics, marijuana, depressants, stimulants and other dangerous drugs. No controlled substance can be exported except in compliance with specified procedures which vary according to the schedule of the substance. Registration of importers and exporters of substances classified in schedule I or II would be based on the Attorney General's determination that this would be consistent with the public interest and certain treaty obligations.

**Pending Amendments:** None.

### Environmental Protection Agency

#### *Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136)*

**Products or Financing Arrangement:** Substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or for use as a plant regulator, defoliant or desiccant. (7 U.S.C. 136)

**Regulatory Authority for Domestic Use:** Registration of pesticides for specified uses upon a finding by EPA of no "unreasonable adverse effect on the environment"; EPA registration of pesticide producers; EPA can issue "stop sale, use, or removal" orders and seek court orders for seizure of noncomplying pesticides. (7 U.S.C. 136a; 136e; 176k)

**Regulatory Authority for Exports:** Pesticides are subject only to certain labeling regulations when intended solely for export and are prepared or packed according to specifications or directions of the foreign purchaser. Pesticides not registered in the U.S. may be exported if, prior to export, the foreign purchaser signs a statement acknowledging that it understands the product cannot be sold in the U.S. A copy of the statement is forwarded to the appropriate government official of the importing country.

EPA notifies State Department whenever a registration is cancelled or suspended. State Department notifies foreign governments and appropriate international agencies.

EPA, in cooperation with State and other appropriate federal agencies are to participate and cooperate in international efforts to develop improved pesticide research and regulation. (7 U.S.C. 136(f))

**Pending Amendments:** None.

#### *Resource Conservation and Recovery Act of 1976 (42 U.S.C. § 6901-6967)*

**Products or Financing Arrangement:** Hazardous wastes, which are defined to include solids, liquids, and sludges which may cause or significantly contribute to an increase in serious irreversible or incapacitating reversible, illness; or pose a substantial present or potential hazard to human health on the environment when improperly treated, stored, transported or disposed of, or otherwise managed. (42 U.S.C. § 6903(5))

**Regulatory Authority for Domestic Use:** EPA to identify hazardous wastes, establish standards applicable to generators and transporters of such waste and owners and operators of hazardous waste treatment, storage and disposal facilities. Each person owning or operating a hazardous waste treatment, storage or disposal facility is required to obtain a permit from EPA within prescribed time periods. EPA is to assist states in the development of hazardous waste programs. (42 U.S.C. §§ 6921-25, 6930)

**Regulatory Authority for Exports:** None.

**Pending Amendments:** None.

#### *Toxic Substances Control Act (15 U.S.C. 2601)*

**Products or Financing Arrangement:** Chemical substances or mixtures except pesticides, tobacco, nuclear materials, firearms, etc. (15 U.S.C. 2602)

**Regulatory Authority for Domestic Use:** EPA may require testing, impose pre-market notice requirements, require labeling, limit or prohibit sale if tests show a reasonable basis to conclude an unreasonable risk of injury to health or the environment, or obtain a court order to seize a substance or mixture posing an imminent hazard. (15 U.S.C. 2603-2606)

**Regulatory Authority for Exports:** Statute does not apply if substance, mixture or article is manufactured for export and is labeled as such except as follows:

1. If EPA finds the substance, mixture or article will present "an unreasonable risk of injury to health within the United States or to the environment of the United States," it may control export. Administrator may order testing to make such a determination.

2. If a person intends to export a substance which has been subject to certain regulatory actions, such person shall notify EPA and EPA shall furnish foreign government notice of the rule, order, action, or relief. (15 U.S.C. 2611)

**Pending Amendments:** None.

### Food and Drug Administration

#### *Federal Food, Drug and Cosmetic Act (21 U.S.C. 321(i))*

**Products or Financing Arrangement:** Foods. (21 U.S.C. 321(f))

**Regulatory Authority for Domestic Use:** Secretary may establish standards of identity, levels of adulteration, and standards of misbranding. (21 U.S.C. 341-343)

**Regulatory Authority for Exports:** May be exported, (no permit required) if—

(1) Accords to specifications of foreign purchasers.

(2) Is not in conflict with laws of foreign country.

(3) Is labeled for export.

(4) Is not offered for domestic sale. (21 U.S.C. 361(d))

Foods which are subject to Emergency Permit Controls and for which a permit has not been issued, cannot be exported. (21 U.S.C. 344)

**Pending Amendments:** None.

**Products or Financing Arrangement:** Cosmetics. (21 U.S.C. 321(1))

**Regulatory Authority for Domestic Use:** Secretary may establish standards of adulteration and misbranding. (21 U.S.C. 361-362)



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**Regulatory Authority for Exports:** May be exported, (no permit required) if—

(1) Accords to specification of foreign purchasers.

(2) Is not in conflict with laws of foreign country.

(3) Is labeled for export.

(4) Is not offered for domestic sale. (21 U.S.C. 381(d))

**Pending Amendments:** None.

**Products or Financing Arrangement:** Drugs approved for United States use. **Regulatory Authority for Domestic Use:** Drug must previously have been approved by FDA.

**Regulatory Authority for Exports:** A drug which may be sold in interstate commerce may be exported without special requirements. A drug which is misbranded or adulterated may be exported (no permit required) if—

(1) Accords to specifications of foreign purchasers.

(2) Is not in conflict with laws of foreign country.

(3) Is labeled for export.

(4) Is not offered for domestic sale.

This provision also applies to antibiotics, insulin, and pre-1938 drugs. (21 USC 381(d))

**Pending Amendments:** May be exported (permit required) so long as drug meets manufacture and quality standards required for domestic products (outlined in subparts 3 and 4 of H.R. 4258 and S. 1045). (H.R. 4258 and S. 1045, Sec. 134)

**Products or Financing Arrangement:** New drugs; New animal drugs. (21 USC 321(p) and (w))

**Regulatory Authority for Domestic Use:** No introduction of new drugs or animal drugs in interstate commerce without approval by FDA ("Interstate commerce" between any state or territory and any place outside thereof). (21 USC 355(a) and 360b(a))

**Regulatory Authority for Exports:** No exportation permitted unless the new drug is in complete compliance with an approved new drug application.

Exportation authorized for *investigational* use only if FDA receives, through the State Department a formal request from the foreign government. The request must specify that such government has adequate information about the drug and the proposed *investigational* use. (21 CFR 312.1 and 21 CFR 511.1)

**Pending Amendments:** New drugs not yet approved in the United States, or approved drugs not in compliance with domestic requirements, may be exported if exporting firm applies to the HEW Secretary for an export permit. The Secretary shall issue the permit unless he finds:

(1) Drug does not accord to specifications of foreign purchaser.

(2) Drug is not labeled for export.

(3) The foreign government has not been informed of the legal status of the drug in the United States and it does not disapprove of importation of the drug.

(4) Export of the drug is contrary to the public health (presumably of the United States or the foreign country). (H.R. 4258 and S. 1045, Sec. 134-135)

**Products or Financing Arrangement:** Medical devices for human uses. (21 USC 321(h))

**Regulatory Authority for Domestic Use:** Depending upon the type of device, the Secretary may (1) establish performance standards, (2) require premarket approval, (3) ban devices which present unreasonable deception or an unreasonable and substantive risk of illness or injury, and (4) require recall. (21 USC 360d, 360e, 360f, 360h)

**Regulatory Authority for Exports:** Generally, may be exported (no permit required) if:

(1) Accords to specifications of foreign purchasers.

(2) Is not in conflict with the laws of foreign country.

(3) Is labeled for export.

(4) Is not offered for sale in domestic commerce.

In addition to the above, devices which do not comply with performance standards, have not received premarket clearance, or have been banned cannot be exported unless the Secretary has determined:

(1) That exportation is not contrary to the public health and safety, and

(2) That the foreign country approves. (21 USC 381(d)(1) and (d)(2))

Similar requirements for *investigational* devices. (proposed 43 FR 20749 to 21 CFR 812.19(b))

**Pending Amendments:** None.

**Public Health Service Act (42 USC 282)**

**Products or Financing Arrangement:** Biological Products. (42 USC 282(a))

**Regulatory Authority for Domestic Use:** HEW Secretary licenses

establishments which propagate or manufacture and prepare biological products (e.g., viruses, serums, vaccines, blood, toxins). (42 USC 282(a))

**Regulatory Authority for Exports:** No exportation of products which cannot be sold in United States (42 USC 282(a))

**Pending Amendments:** None.

**Public Health Service Act (42 USC 283b)**

**Products or Financing Arrangement:** Electronic products. (42 USC 283c(2))

**Regulatory Authority for Domestic Use:** Secretary of HEW may establish performance standards to control emission of electronic product radiation

and require notification for defects or noncompliance. (42 USC 283f(a); 283g)

**Regulatory Authority for Exports:** Products for export need not conform to standards if—

(1) Labeled for export.

(2) Product meets all applicable requirements of the foreign country. (42 USC 283f(a)(3))

**Pending Amendments:** None.

**U.S. Department of Agriculture Food Safety and Quality Service**

**Federal Meat Inspection Act (21 U.S.C. 601 et seq.)**

**Products or Financing Arrangement:** Meat or meat food products of cattle, sheep, swine, goats, horses, mules or other equines.

**Regulatory Authority for Domestic Use:** Secretary has regulatory authority with respect to standards of identity, adulteration and misbranding.

**Regulatory Authority for Exports:** Meat or meat food products which are not allowed to enter interstate or foreign commerce may not be exported. Provisions in regard to preservatives used in meat food products shall not apply to such products exported if:

(1) They are prepared or packed according to specifications or directions of the foreign purchasers and

(2) No substance used therein is in conflict with the laws of the country to which the products are to be exported. (21 U.S.C. 606)

In addition, livestock and meat or meat food products derived therefrom that are offered for export must undergo an export inspection and certification procedure. (21 U.S.C. 612-618)

**Pending Amendments:** None.

**Poultry Products Inspection Act (21 U.S.C. 451 et seq.)**

**Products or Financing Arrangement:** Poultry and poultry products.

**Regulatory Authority for Domestic Use:** Secretary has regulatory authority with respect to standards of identity, adulteration and misbranding.

**Regulatory Authority for Exports:** Poultry or poultry products which are not allowed to enter interstate or foreign commerce may not be exported.

**Pending Amendments:** None.

### Attachment B

Department of Justice,  
Washington, D.C.

Subject: Legal Memorandum dated April 11, 1980. Titled: Controlling the Export of Hazardous Substances Under the Export Administration Act of 1979 (50 U.S.C. App. 2401 et seq.).

To: Honorable Esther Peterson, Special Assistant to the President for Consumer Affairs.



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From: Leon Ulman, Deputy Assistant Attorney General, Office of Legal Counsel.

The Attorney General has directed the Office of Legal Counsel to undertake the publication of selected opinions of this Office. We believe the attached opinion addressed to you is appropriate for publication. Unless we hear from you to the contrary within ten days, we shall assume that you have no objection to its publication.

This Office will undertake review of the opinion for accuracy of citations, etc., and will subsequently prepare an appropriate headnote. In instances involving questions of conflict-of-interest and ethical matters, the opinion will be sanitized to delete identifying details. Minor editorial revisions may also be made.

April 11, 1980.

Memorandum for the Honorable Esther Peterson, Special Assistant to the President for Consumer Affairs

Re Controlling the Export of Hazardous Substances Under the Export Administration Act of 1979 (50 U.S.C. App. 2401 *et seq.*).

This responds to your request of January 9, 1980, for our opinion on whether the Export Administration Act of 1979, Pub. L. No. 96-72, 93 Stat. 503, to be codified at 50 U.S.C. App. § 2401 *et seq.*, provides authority for the President to control the export of hazardous substances in pursuit of the foreign policy of the United States. We conclude that the Act does provide such authority. You have also asked whether the President, in exercising such authority, is formally bound by the factors for his considerations that are set forth in § 6 of the 1979 Act. We conclude that he is not.

### *I. Substantive Authority to Control Exports of Hazardous Substances*

In our previous memorandum dated January 30, 1979, to Deputy General Counsel Moyer of the Department of Commerce (copy enclosed), we concluded that the 1979 Act's predecessor statute, the Export Administration Act of 1969, gave the President authority to control exports of hazardous substances for foreign policy purposes. The issue, then, is whether the 1979 Act continued this authority, or modified it in any respect.

The Act's operative language for foreign policy controls was left essentially unchanged in 1979. It authorizes the President to "prohibit or curtail the exportation of any goods, technology, or other information . . . to the extent necessary to further significantly the foreign policy of the United States or to fulfill its declared international obligations." (§ 6(a); compare 50 U.S.C. App. § 2404(2) (Supp. V 1975)). Although the phrase "foreign policy" is not defined in either the 1969 or the 1979 statute, Congress provided some explanatory legislative history in 1979. It did so in the course of separating authority for foreign policy controls from that for national security controls, and providing different criteria and procedures for each. In the House of Representatives, where the separation originated, the Report of the Committee on Foreign Affairs explained how

these two sources of authority differ. (H.R. Rep. No. 200, 96th Cong., 1st Sess. 7 (1969)):

The purposes of foreign policy controls are more vague and more diffuse. The purposes can range from changing the human rights policy of another country; to inhibiting another country's capacity to threaten the security of countries friendly to the United States; to associating the United States diplomatically with one group of countries as against another; to disassociating the United States from a repressive regime. Unlike the situation with national security controls, some of these foreign policy purposes may be served by denying exports even where foreign availability exists. (In the hypothetical case frequently mentioned in hearings and markup, the United States would not want to export thumb screws, even if other countries were doing so.) Since decisions on foreign policy controls are often more political than technical, congressional involvement in those decisions is more appropriate than in the case of national security controls.

The Report's emphasis on the range of purposes that foreign policy controls may serve suggests strongly that controls on exports of hazardous substances are included. The Conference Report provides further support in its statement that this authority "encompasses the full range of U.S. foreign policy goals." H.R. Conf. Rep. No. 482, 96th Cong., 1st Sess. 43 (1979).

The 1979 Act provides definitions of the terms "good" and "technology" as used in § 6. These are certainly broad enough to include hazardous substances. Under § 10(3), "good" is defined to mean "any article, material, supply or manufactured product, including inspection and test equipment, and excluding technical data." The term "technology" is defined by § 10(4) to mean "the information and know-how that can be used to design, produce, manufacture, utilize, or reconstruct goods, including computer software and technical data."

### *II. Procedure for Imposing Foreign Policy Controls*

Procedurally, § 6(e) of the 1979 Act requires that the President "in every possible instance shall consult with the Congress before imposing" foreign policy controls. Upon imposing the controls, the President must report to Congress, specifying his conclusions with respect to a set of criteria for decisions set forth in § 6(b) of the Act. On their face, these criteria are not significantly confining of presidential discretion. (For example, the President is to consider the probability that controls will achieve the intended foreign policy purpose in light of such factors as foreign availability of the goods.) Moreover, the legislative history is clear that these criteria "are to be taken into consideration, but they are not conditions which must be met." (125 Cong. Rec. S 10123, Daily ed. July 21, 1979, Statement of Senator Stevenson on introducing S. 737.) The Committee reports confirm this interpretation. See H.R. Rep. No. 200, *supra*, at 20: "Having considered these criteria, the President is not strictly bound by them." See also Sen. Rep. No. 109, 96th Cong., 1st Sess. 8 (1979), remarking that this provision "did not establish criteria to be met

but factors to be considered, and recognized that the President, having considered them, might find one or more of the factors irrelevant to a decision to impose or remove controls."

Section 6(e) also requires the President to report any alternative means that were attempted to achieve the purposes of the controls, or his reason for eschewing them; § 4(c) of the Act allows the President to impose foreign policy controls only on a determination that the embargoed goods cannot be replaced through sources outside of the United States, "unless the President determines that adequate evidence has been presented to him demonstrating that the absence of such controls would prove detrimental to the foreign policy or national security of the United States."

### *III. Conclusion*

Thus we conclude that under the Export Administration Act of 1979, the President may control the export of hazardous substances in appropriate circumstances. We would enter one caveat, however. Certain statutes presently impose conditions on the export of hazardous substances, e.g., the Toxic Substances Control Act, 15 U.S.C. § 2611, requiring notice to the recipient nation of product risks. It may be that these statutes foreclose presidential discretion to take some actions, for example banning a product that a statute allows to be exported if notice is given. In the absence of a specific proposal, we have not researched such questions, and wish merely to alert you to them.

Leon Ulman,  
Deputy Assistant Attorney General, Office of Legal Counsel.

January, 30, 1979.

Memorandum for Homer E. Moser, Jr.,  
Deputy General Counsel, Department of Commerce

Re Controlling Exports of Hazardous Substances Under the Export Administration Act of 1969.

Assistant Attorney General Harmon has asked me to respond to your letter of October 21, 1978, inquiring whether current authority under the Export Administration Act of 1969, 50 U.S.C. App. § 2401 *et seq.* (1970), as amended, Act of June 22, 1977, Pub. L. 95-52, 91 Stat. 235, may be used by the Department of Commerce to control the export of hazardous substances upon a determination by the Department, in consultation with the Department of State, that such controls are necessary to further the foreign policy of the United States. We conclude that existing authority is sufficient for such a purpose.

Section 3(2) of the Act states: It is the policy of the United States to use export controls . . . (B) to the extent necessary to further significantly the foreign policy of the United States and to fulfill its international responsibilities. . . .

50 U.S.C. App. § 2404(2) (Supp. V 1975). Section 4(b) of the Act authorizes the President to "effectuate" this and the other declared statutory policies by prohibiting or curtailing the exportation of:

. . . any articles, materials, or supplies, including technical data or any other

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information, subject to the jurisdiction of the United States or exported by any person subject to the United States.

50 U.S.C. App. § 2403(b)(1) (Supp. V 1975), amended by the Act of Dec. 28, 1977, Pub. L. 95-223, 91 Stat. 1629. The President has delegated this authority to the Secretary of Commerce. Executive Order No. 12002, 3 CFR 133 (1978 Comp.).

No definition of "the foreign policy of the United States," restrictive or otherwise, appears within the Act,<sup>1</sup> which suggests that any significant foreign policy concern may be the basis for appropriate export controls.

What little legislative history is relevant supports this conclusion. The authority to use export controls to further the foreign policy of the United States and to permit it to fulfill its international responsibilities was created first by the Export Control Act of 1949, 63 Stat. 7. The accompanying House of Representatives committee report emphasized, with respect to foreign policy objectives apart from national security, the importance of controls in connection with the fulfillment of Marshall Plan obligations and our relations with Soviet bloc countries. H.R. Rep. No. 18, 81st Cong., 1st Sess. 2 (1949). The 1949 Act granted export control authority to the President through 1951, but was extended for two-, three-, or four-year intervals until 1969. (See Appendix to this memorandum.) The legislative history of the Export Control Act extensions indicates no Congressional intent to limit the scope of foreign policy-oriented controls, but instead reflects Congress' changing foreign policy concerns throughout the Korean conflict and the Cold War. The Senate Committee on Banking and Currency, summarizing in 1962 the history to that point of the administration of export controls, said:

\* \* \* [T]he act gives the President the widest possible discretion to limit, restrict, or prohibit entirely exports to any person or to any Nation of any or all commodities or articles whether or not, and to whatever extent they are of military, industrial, or economic significance, if limitation, restriction, or prohibition is found to be in the interest of our national security or our foreign policy or necessary because of domestic shortages. The act is not limited to strategic materials or to critical material or to essential commodities. It will support a total embargo or the mildest of restrictions. The requirements of foreign policy, national security, and domestic shortages are the only tests.

<sup>1</sup> Our research discloses that the phrase "foreign policy" is nowhere defined in the United States Code.

S. Rep. No. 1578, 87th Cong., 2d Sess. 4-5 (1962).

Congress substituted the Export Administration Act of 1969 for the Export Control Act of 1949, reiterating and adding to the earlier Act's declared objectives, and revising the system of export control administration. The House Committee on Banking and Currency, in reporting the bill that was the basis for the law as enacted, noted with apparent approval the disparate ways in which controls had been used to further United States foreign policy, including controls on the export of non-strategic goods to Eastern Europe, the embargo on exports to Rhodesia, and restrictions on the export of commodities and data for use in the testing or development of nuclear technology. H.R. Rep. No. 524, 91st Cong., 1st Sess. 2 (1969). In the nearly ten years since the implementation of the 1969 Act, Congress has continued to leave unconstrained the President's power to control exports to further the nation's foreign policy.

No statute under which hazardous substances are currently controlled domestically provides for export controls. However, Congress has already recognized the importance of domestic-substance control decisions to our foreign policy by providing in the Toxic Substances Control Act, 15 U.S.C. § 2611 (1976), for notice to other countries as to any government data available with respect to chemical substances intended for export to those countries in cases in which the submission of data to the Environmental Protection Agency concerning such substances is required by the Act. In 1978, Congress enacted similar amendments with respect to products and substances regulable under the Consumer Product Safety Act, 15

U.S.C. § 2051-81 (1976), the Federal Hazardous Substances Act, 15 U.S.C. § 1261-74 (1976), and the Flammable Fabrics Act, 15 U.S.C. § 1191-1204 (1976). Act of Nov. 10, 1978, Pub. L. 95-631, 92 Stat. 3742. In reporting on these amendments, the House Committee on Interstate and Foreign Commerce said:

It is the belief of the Committee that the United States government has an obligation to share the results of its safety research with countries which purchase U.S. exports. Such a policy not only affirms this nation's commitment to human rights, but also strengthens U.S. diplomatic relations and long range export prospects.

H.R. Rep. No. 1164, 95th Cong., 2d Sess. 7 (1978). This language confirms Congress' awareness of the potential relevance to United States foreign policy of governmental decisions to regulate hazardous substances domestically.

In sum, we conclude that the plain language of the Export Administration Act of 1969 affords executive authority to control the export of hazardous substances when necessary to further significantly the foreign policy of the United States. Congress has in no way limited this broad grant of power in thirty years of export control authority extensions, recognizing instead the importance of extensive and flexible executive authority in this area. Congress' awareness of the potentially significant foreign policy implications of internal decisions to regulate or ban hazardous substances is confirmed by the legislative history of the statutes under which such substances are controlled domestically.

Leon Ulman,

Deputy Assistant Attorney General, Office of Legal Counsel.

### Appendix.—Legislative History of the Export Control Act of 1949

| Note                                                                          | Year | Public law | Session laws   |
|-------------------------------------------------------------------------------|------|------------|----------------|
| Export Control Act of 1949; authority granted to 1951                         | 1949 | 81-11      | 63 Stat. 7.    |
| Authority extended to 1953                                                    | 1951 | 82-33      | 65 Stat. 43.   |
| Authority extended to 1958                                                    | 1953 | 83-82      | 67 Stat. 62.   |
| Authority extended to 1958                                                    | 1958 | 84-631     | 70 Stat. 407.  |
| Authority extended to 1962                                                    | 1958 | 85-486     | 72 Stat. 220.  |
| Authority extended to 1965                                                    | 1960 | 86-484     | 74 Stat. 130.  |
| Authority extended to 1969                                                    | 1962 | 87-515     | 76 Stat. 127.  |
| Export Administration Act of 1969 enacted; authority granted to 1972          | 1969 | 89-63      | 79 Stat. 209.  |
| Equal Export Opportunity Act of 1971; extends authority to 1974               | 1969 | 91-184     | 83 Stat. 841.  |
| Authority extended to 1978                                                    | 1972 | 92-412     | 86 Stat. 844.  |
| Authority lapses                                                              | 1974 | 93-500     | 88 Stat. 1553. |
| Export Administration Amendments of 1977; extends authority to Sept. 30, 1979 | 1977 | 95-52      | 91 Stat. 235.  |
| Amends section 4(b)(1) of the Export Administration Act of 1969               |      | 95-223     | 91 Stat. 1629. |

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45 FR 54709

Published 8/15/80

### 10 CFR Part 50

#### Functional Criteria for Emergency Response Facilities; Workshops

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Notice of workshops for review of proposed functional criteria for emergency response facilities.

**SUMMARY:** The NRC staff is developing guidance for an acceptable method for providing the emergency response facilities needed to implement the plans for coping with emergencies that are required by paragraph 50.34 and Appendix E of 10 CFR Part 50. The proposed functional criteria of the four elements of the emergency response facilities, the Safety Parameter Display (SPDS), the Technical Support Center (TSC), the Emergency Operations Facility (EOF), and the Nuclear Data Link (NDL) are contained in the document NUREG-0696, "Functional Criteria for Emergency Response Facilities." The staff is now soliciting public comment on these functional criteria and the schedule for their implementation and will hold three workshops to present, explain, and discuss the proposed criteria (For the solicitation of public comment, see another notice document published elsewhere in this issue).

**DATES:** August 19—Valley Forge, Pennsylvania. August 20—Chicago, Illinois. August 22—Atlanta, Georgia.

**ADDRESSES:** The workshops will be held from 8:30 a.m. to 5:00 p.m. at the following locations:

August 19—The Sheraton-Valley Forge, Valley Forge, Pennsylvania.

August 20—O'Hare Hilton, O'Hare Airport, Chicago, Illinois.

August 22—The Stadium Hotel, 450 Capitol Ave., SE., Atlanta, Georgia.

**FOR FURTHER INFORMATION CONTACT:** Mr. Warren Minners, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Phone: 301/492-7581).

**SUPPLEMENTARY INFORMATION:** Agenda for Emergency Response Facility Workshop.

#### Introduction

Purpose and scope of the meeting  
Background and basis for proposed criteria

#### Presentation of Proposed Emergency Response Facilities

Safety Parameter Display  
Technical Support Center  
Nuclear Data Link

#### Discussion, Questions and Comments

Location and habitability of the TSC and EOF  
Reliability, surveillance and limiting conditions of operation  
Separation and independence of data acquisition system Role of the NDL  
Individual statements or comments by participants and public  
Concluding Statement by NRC

Dated at Bethesda, Maryland this 6th day of August 1980.

**Roger J. Mattson,**

*Director, Division of Safety Technology, U.S. Nuclear Regulatory Commission.*

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45 FR 55413

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### 10 CFR Part 50

#### **Emergency Planning: Negative Declaration; Finding of No Significant Impact for Effective Rule Changes**

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final negative declaration; finding of no significant impact.

**SUMMARY:** The Nuclear Regulatory Commission's regulations require that the environmental impact of certain regulatory actions, including substantive amendments to 10 CFR Part 50, be evaluated to determine if an environmental impact statement should be prepared. If it is determined an environmental impact statement need not be prepared, a negative declaration will be issued. The NRC has evaluated the environmental impact of the proposed changes to Part 50 dealing with emergency planning requirements for nuclear power plants (published elsewhere in this issue), and has determined that the rule changes will not have a significant impact on the human environment. Therefore, an environmental impact statement will not be prepared, and a negative declaration is being issued.

**DATES:** The rule changes for emergency planning will become effective November 3, 1980.

**ADDRESSES:** Copies of the Final Environmental Assessment, NUREG-0685, and the comments received by the Commission may be examined in the Commission's Public Document Room at 1717 H Street NW., Washington, D.C. and at local Public Document Rooms. Single copies of the final Environmental Assessment (NUREG-0685) are available for purchase through the NRC GPO sales program for \$4.25 (USNRC, Attention Sales Manager, Washington, D.C. 20555).

**FOR FURTHER INFORMATION CONTACT:** Michael T. Jamgochian, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Telephone: (301) 443-5966.

**SUPPLEMENTARY INFORMATION:** On January 21, 1980 the Nuclear Regulatory Commission published a "Draft Negative Declaration; Finding of No Significant Impact" (45 FR 3913, January 21, 1980) for proposed changes to 10 CFR Part 50, §§ 50.33, 50.47, 50.54 and Appendix E that deal with emergency

planning requirements for nuclear power plants (44 FR 75167, December 19, 1979). A draft Environmental Assessment accompanied the draft Negative Declaration. The comment period ended on February 18, 1980.

Sixteen sets of comments were submitted and have been analyzed. Although all 16 commenters felt that the draft Environmental Assessment was inadequate to support the Finding of No Significant Impact, the staff analysis does not support this view. The commenters suggested that some points in the draft Environmental Assessment were in error, some required much more detailed discussion, and some points had been ignored. The errors have been corrected and do not significantly affect the earlier conclusion. The levels of detail and the omissions are generally related to the penalties associated with noncompliance with the rule. The staff originally judged that invocations of the noncompliance penalties (i.e., nuclear power plant shutdown) would be infrequent and of short duration and the associated impacts would thus be insignificant. Commenters asserted that there will be frequent and long-term shutdowns which will have severe impacts which would require detailed consideration in an Environmental Impact Statement. The staff analysis has supported the judgment of infrequent, short-term shutdowns and thus concludes that no additional detailed studies are necessary.

Minor revisions have been made in the environmental assessment reflecting comments received, but its conclusions have not been altered. Based on this assessment, a final determination has been made by the Director, Office of Standards Development, that the proposed rule changes will not have a significant impact on the human environment and, therefore, that an environmental impact statement will not be prepared for these rule changes.

#### **Analysis of Comments**

The groups that submitted comments are identified on the Table together with their principal comments. No comments were received from State or local governments, other Federal agencies, or public interest groups.

The main point of each set of comments was that an Environmental Impact Statement should be prepared for the rule changes and that the Environmental Assessment "... inadequately addresses the environmental impact of the Emergency Planning Proposed Rule and the economic and social impacts on U.S. industry of long-term or permanent premature shutdowns of nuclear plants" (AEP). The comments have been reconstructed into 14 general criticisms,

which have been analyzed for their relevance to the validity of the conclusions in the "Draft Negative Declaration; Finding of No Significant Impact."

One matter warrants additional mention here. An assumption was made in preparation of the DEA that shutdowns of nuclear power plants as a result of actions taken under these rule changes would be infrequent and of short duration. This assumption is critical to the decision that an Environmental Impact Statement should not be prepared. The basis for this assumption was that, since State and local authorities have the responsibility, in common with the NRC, to protect public health and safety and are concerned with meeting the energy needs of their citizens, it is likely that they will cooperate to ensure the continued safe operation or timely commencement of safe operation of nuclear generation capability within their jurisdiction. The only significant adverse reaction by the State and local governments that must bear this burden has been that complications in funding of State programs and lead time for equipment acquisition might make it difficult to completely satisfy all of the planning and preparedness requirements by the date set forth in the proposed rule changes. As a direct result of this, the deadline for plans and implementation has been extended to April 1, 1981, and the deadline for having warning systems in place has been extended to July 1, 1981. These extensions should be sufficient in most cases.

It should also be noted that the Commission has chosen the alternative that requires Commission action to initiate a shutdown. Conditions are specified in the regulation that the Commission will use in each case to determine whether a shutdown is warranted. When considered together, the lack of any significant adverse comment from State and local governments, the necessity for Commission action before a plant will be shut down, and the conditions for whether a shutdown is warranted, all argue convincingly that the assumption that shutdowns will be infrequent and of short duration is sound. Thus, the assumption is retained in the final Environmental Assessment (NUREG-0685) and the impacts of extended shutdowns are not considered valid impacts of these rule changes.

The 14 reconstructed general comments and a discussion of each follow:

1. *Three commenters (see Table) contend that alternatives to the proposed rule changes are inadequately addressed. They specifically mention*



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alternative ways of achieving the same end such as proposing legislation.

In view of the existing safety record of the nuclear industry and the lack of effective preparation for the TMI accident, the Commission had the following three alternatives from which to choose:

A. The Commission could take no immediate action itself while encouraging other parties, i.e., the Congress, other Federal Agencies, the States, and the utilities themselves to take effective action. This "no action" alternative would be counter to the Commission's legislative mandate to protect public health and safety. In fact, the TMI accident was a clear indication that this "urging without requiring" emergency preparedness had proved to be ineffective. This alternative clearly could not stand in the face of the Commission's responsibility in this area.

B. The Commission is a regulatory agency and has as one of its chief tools the authority to issue regulations that bind those parties that it regulates. If an effective method for achieving protection of public health and safety is available through promulgation of regulations with specific requirements and penalties and conditions governing those requirements and penalties, this should be the proper way for the Commission to proceed.

C. If the Commission judged that danger to public health and safety was significant and imminent because of continued operation of existing plants while effective regulations are developed, it had the authority to impose immediate shutdowns until a solution could be found. The safety record of nuclear power, including the TMI accident, does not support an industry-wide judgment of imminent, significant danger. However, potential does exist for significant harm to the public in the event of a severe accident and the events at TMI suggest that plans must be made to account for this potential problem. Notwithstanding this potential, given the likelihood of an accident requiring off-site emergency protective measures, immediate industry-wide shutdown and the attendant severe long-term impacts are not warranted.

Alternatives A and C are clearly unacceptable. The discussion of alternatives in the Final Environmental Assessment has not been changed from that in the Draft Environmental Assessment.

2. Seven commenters (see Table) assert that the impacts of shutdowns are underestimated and that shutdowns of multiple unit plants or several in the same State were not considered.

Matrix Display of Commenters and Major Comments

| Commenters <sup>1</sup>                                                                                                                         | AIF | Yank. At. | Com. Ed. <sup>2</sup> | Con. Ed. | AEP | EEI | LLLM | HU | PASNY | BG&E | D & L | Duke | SPP&T | DOE | LNRA&T |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|-----------------------|----------|-----|-----|------|----|-------|------|-------|------|-------|-----|--------|
| Major Comments                                                                                                                                  |     |           |                       |          |     |     |      |    |       |      |       |      |       |     |        |
| 1. Alternatives inadequately addressed                                                                                                          | X   | X         |                       |          |     |     |      |    |       |      |       |      |       |     | X      |
| 2. Impacts of shutdowns underestimated (costs)                                                                                                  | X   | X         |                       | X        |     |     |      |    |       | X    |       |      | X     | X   | X      |
| 3. Health effects of fossil substitution underestimated                                                                                         | X   |           |                       | X        |     |     |      |    |       |      |       |      |       | X   | X      |
| 4. Challenge assumption of infrequent, short-duration shutdowns                                                                                 | X   | X         |                       | X        | X   | X   | X    |    | X     |      |       |      | X     |     | X      |
| 5. Judgement on State cooperation unsubstantiated                                                                                               | X   | X         | X                     | X        | X   |     |      |    |       |      |       |      |       | X   | X      |
| 6. Long-term impacts not addressed                                                                                                              | X   |           |                       | X        | X   |     |      |    |       | X    |       |      |       |     | X      |
| 7. Psychological and physical risks of false alarms not evaluated                                                                               | X   | X         |                       |          |     |     |      |    |       | X    |       | X    |       | X   | X      |
| 8. Use of fuel-mix improper, variation in cost of replacement power                                                                             |     |           | X                     |          | X   |     |      |    |       | X    |       | X    |       | X   |        |
| 9. Significant impacts due to linkage between approval and continued operation                                                                  |     | X         |                       | X        |     | X   | X    |    | X     |      |       |      |       |     |        |
| 10. Proposed rule prior to FEMA                                                                                                                 |     | X         |                       |          |     |     |      |    |       |      | X     |      |       |     |        |
| 11. Costs too low (15 minute warning system not included)                                                                                       |     | X         |                       |          |     |     |      | X  |       |      | X     | X    | X     | X   | X      |
| 12. Decisions granting exemptions or resumption of operation should be classified as categorical exclusions under Commission's NEPA regulations |     |           | X                     |          |     |     |      |    |       |      |       |      |       |     |        |
| 13. No consideration of costs to utilities                                                                                                      |     |           |                       |          |     |     |      |    |       |      | X     | X    |       |     |        |
| 14. No consideration of plants under construction                                                                                               |     |           |                       |          |     |     |      |    |       |      |       |      |       |     | X      |

<sup>1</sup> Key to Commenters

AIF - Atomic Industrial Forum  
 Yank. At. - Yankee Atomic Electric Co.  
 Com. Ed. - Commonwealth Edison<sup>2</sup>  
 Con. Ed. - Consolidated Edison Company of New York, Inc.  
 AEP - American Electric Power Service Corporation  
 EEI - Edison Electric Institute  
 LLLM - LeBoeuf, Lamb, Leiby & MacRae (for five utilities)  
 HU - Northeast Utilities

PASNY - Power Authority of the State of New York  
 BG&E - Baltimore Gas and Electric  
 D & L - DeBevoise & Liberman (for three utilities)  
 Duke - Duke Power Company  
 SPP&T - Shaw, Pittman, Potts & Trowbridge (for eight utilities)  
 DOE - U. S. Department of Energy  
 LNRA&T - Lowenstein, Newman, Reis, Axelrod & Toll (for two utilities)

<sup>2</sup> Two letters

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The DEA was prepared with the understanding that ever increasing fuel prices make it difficult to make stable predictions of the costs of replacement power. While individual values of replacement costs may be in error, the upper end of the range of costs of replacement power, which is compared in the Environmental Assessment to the costs of compliance, is only changed by about 36% when the heat rate is changed as suggested. The response to comment eleven indicates that the costs of compliance were also underestimated. The relative comparison of these two costs was used to demonstrate the strong economic incentive that exists for all parties to strive for effective emergency planning and preparedness. The staff agrees that the net plant heat rate assumed in the DEA is low and therefore changed the assumed heat rate from 9,400 Btu/kWh to 11,000 Btu/kWh. Accordingly, the cost figures have been modified in the Final Environmental Assessment; but these modifications do not alter the conclusions of the Environmental Assessment.

The question of multiple-plant shutdowns because of a common reason, i.e., an unacceptable State plan or multiple units on a site where the local plan is unacceptable, is a more difficult problem. The State plans are only a part of the overall Federal Emergency Management Agency (FEMA) program to enhance the ability of State governments to handle emergencies. The economic incentive for the utilities to help the States in every way possible should result in the preparation of plans and equipment for a nuclear plant emergency that will be a sound, significant contribution to the overall capability of a State to handle many different kinds of emergencies. The provision of conditions that permit issuance of an operating license or continuation of operation, the extension of the compliance date and deadline for warning systems to be in place, and the record of cooperation from the States up to the present time make it unlikely that any State's program will be so deficient that shutdown of all plants in the State will be required.

The potential that an unsatisfactory local plan might result in the shutdown of all units on a specific site appears to be significantly greater. Depending on the size and number of the units involved, the incentive of the utility for aiding the local governments is also greater. The potential magnitude of the impact of shutdown in these cases is two to three times greater than for the single unit case, and this determination has been added to the Environmental

Assessment. In any case, it would appear that whether these impacts, if severe enough, constitute "other compelling reasons" to permit continued operation will be determined in the individual reviews.

*3. Four groups comment that health effects of fossil substitution are underestimated in the draft Environmental Assessment and that other effects are ignored.*

The critical assumption in the draft and final Environmental Assessment is that shutdowns will be infrequent and of short duration. In such a case, the fossil generating capacity is simply that which is available for normal replacement power during refueling and maintenance outages and would probably be used in periods of peak demand until the utility phases it out of the generating system completely. (The impacts are thus ones that occur anyway, but at a different time. Short, infrequent shutdowns will only change the time period for suffering an impact that will most likely be felt eventually anyway.) For such short-term replacement, no new plants will be built. The draft and final Environmental Assessment accepts these impacts as a consequence of infrequent and brief shutdowns. (A more accurate analysis might conclude that there is zero cumulative impact because the useful life of the replacement capability is unaltered.) The discussions in the Final Environmental Assessment are unaltered on this subject.

*4. Nine commenters challenged the assumption that shutdowns would be infrequent and of short duration and questioned the lack of treatment of the availability of replacement capacity.*

The assumption that shutdowns will be infrequent and of short duration is critical to the validity of the Environmental Assessment. At the time when the Draft Environmental Assessment was prepared, this assumption was based on the assertion that State and local governments (having in common with NRC the responsibility to protect public health and safety) will cooperate to provide fully for protection of the public. Since that time, the Commission, in cooperation with FEMA, has been working diligently to help State and local governments develop satisfactory emergency plans and programs. The response of the State and local governments has confirmed the validity of the earlier assumption. In addition, no State or local government provided any comment on the Draft Environmental Assessment, thus indicating at least tacit agreement with the basis for the assumption.

Since the basis for the assumption of infrequent shutdowns has not received substantive challenge from the parties directly involved, but there has instead been activity that tends to confirm the assumption, it will remain as a fundamental assumption of the final Environmental Assessment.

The availability of replacement capacity also hinges on this assumption. Part of the purpose of reserve capacity is replacement during plant outages. As long as shutdowns are infrequent and of short duration, they should fit into this normal pattern of utilization of replacement capacity. No additional discussions of this topic have been prepared for the final Environmental Assessment.

*5. Seven commenters contend the judgment that "... it is likely that the States will cooperate to assure the continued safe operation or timely commencement of safe operation of nuclear generation capability within their jurisdiction" is unsubstantiated.*

While this assumption was made in the absence of first-hand information, the experience of the Commission since December 1979, in attempting to work with state and local government officials, has confirmed the accuracy of this assumption.

*6. Five commenters assert that impacts of long-term shutdowns are not addressed.*

The assumption that shutdowns will be infrequent and of short duration defines the scope of this Environmental Assessment. As described above, long-term shutdowns are not the expected result of these rule changes. The goal of these rule changes is timely implementation of adequate emergency plans and programs. The draft and final Environmental Assessment address the impacts of this action based on the expected consequences and practical considerations of implementation of the provisions of the rule changes. No analysis of the effects of long-term shutdowns has been added to the final Environmental Assessment.

*7. Six commenters contend that psychological and physical risks to the public of false alarms are not evaluated.*

The Emergency Action Level Guidelines (NUREG-0610) recommend notification of the public when a "Site Emergency" has been declared. The expected frequency of an event of this type is predicted to be 1 in 100 to 1 in 5,000 per reactor per year. The high end of this range indicates that two such warnings might occur over the effective life (40 years) for every five units. The low end indicates one event over the life of 125 units. Far from causing excessive psychological and physical risks, this

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kind of behavior should lead to a more accurate public perception of the true incidence of risk from nuclear power facilities and a more practical and considered response to an emergency when one occurs. No change has been made in the final Environmental Assessment.

8. *Five commenters assert that the use of the mix of fuels already in use in the State is a poor predictor of what would be the fuel replacement capacity for a specific plant shutdown.*

A generic assessment must make some averaging assumptions or become hopelessly lost in detail. In this case, the commenters are correct that this is a "gross assumption." It is, however, sufficient to establish the range of costs for replacement power, which is the way the detailed information was used. No change has been made in the mix of fuels used to generically assess the range of costs of replacement power.

9. *Five commenters observe that all of the significant impacts are due to linkage between adequacy of emergency plans and continued plant operation.*

These commenters agree that the impacts of compliance are insignificant and that if there were no penalty associated with inadequate emergency preparedness then an Environmental Assessment or no Environmental Assessment would be appropriate. The thrust of the rule is to protect the public through adequate emergency planning. The thrust of the shutdown provision is to protect the public in the event that adequate provision has not been and is not being made to provide adequate emergency planning and preparedness.

The decision of how the public should be protected has been made, i.e., either emergency planning and preparedness is adequate or a plant may be placed in a condition of safe shutdown. The State and local authorities have the responsibility to determine which option is in the best interest of their citizens. The linkage remains in the effective rule changes. No additional discussion has been provided in the final Environmental Assessment.

10. *Two commenters observed that the proposed rule was issued prior to the expanded role of FEMA in emergency planning for nuclear power plants.*

The NRC and FEMA are working closely to establish and carry out their respective roles in emergency planning for nuclear power plants. The effective rule has been changed to reflect this change in relationship between the two agencies. However, the substantive provisions of the rule have not changed, only the parties responsible for specific actions.

11. *Seven commenters assert that the costs of implementation are too low and that there may not be enough time allowed to achieve adequacy in all areas of emergency planning and preparedness.*

The draft Environmental Assessment based its estimates of cost of implementation on information contained in "Beyond Defense in Depth: Cost and Funding of State and Local Government Radiological Emergency Response Plans and Preparedness in Support of Commercial Nuclear Power Stations," NUREG-0553, October 1979. This report did not consider the costs of a warning system that would effectively warn everyone within 10 miles within 15 minutes of the time when the decision to warn the public is made. The cost estimates in the draft Environmental Assessment thus do not include the costs of 15-minute notification. The estimates provided by the commenters have been used to revise the cost estimate in the final Environmental Assessment. It should be noted that all cost figures are approximate and are only intended to give an estimate of the normal magnitude of costs and fees associated with building and operating a nuclear power plant. Significant variations from these costs for individual cases should be expected.\* These changes do not affect the earlier conclusions of the draft Environmental Assessment.

In response to comments that more time might be needed, the deadline for plans and implementation to be completed has been extended to April 1, 1981, and the deadline for installation of warning systems has been extended to July 1, 1981 to allow for procurement problems. Appropriate changes have been made in the Environmental Assessment but the earlier conclusions remain unaffected.

12. *One commenter suggested that decisions on shutdowns, allowing continued operation despite inadequate plans, or the resumption of operation after a shutdown should be listed in 10 CFR Part 51 as a categorical exclusion.*

The categorical exclusions in Part 51 are those Commission actions that have been judged as a class not to have any significant environmental impact and thus have been excluded from further consideration under those portions of the Commission's regulations that

implement the National Environmental Policy Act of 1969. The Commission will consider this as a comment on the ongoing rulemaking on 10 CFR Part 51 (45 FR 13739).

13. *Two commenters noted that no consideration was given to the costs to the utilities of those portions of the rule changes that upgrade previous onsite requirements.*

This oversight has been corrected. While these costs added a significant increment to the total cost of implementation, this total cost is still low compared to the reference costs of (1) replacement power, (2) tax and fee burden, and (3) capital investment. While several of the cost figures in the final Environmental Assessment have been revised upward, the comparison of these costs has remained unchanged and the conclusions of the Environmental Assessment are unchanged.

14. *One commenter observed that there is no consideration given to plants under construction.*

The cost estimates were forecast for all plants scheduled to be operating by the time the rule was to become effective. To go beyond this period would only complicate the estimates with future costs of greater uncertainty. The purpose here was to present an approximation of the relative significance of the cost impacts to determine whether a more detailed analysis is necessary. The relative magnitude of these costs is well established by the information at hand and these are clearly sufficient to support a decision without the preparation on environmental impact statement.

Dated at Bethesda, Maryland, this 6th day of August 1980.

For the Nuclear Regulatory Commission,  
**Robert B. Minogue,**  
Director, Office of Standards Development,  
U.S. Nuclear Regulatory Commission.

\* Northeast Utilities indicated costs as much as 2.5 times those quoted in the Environmental Assessment but also cited unusual complications such as large numbers of local governments that escalated their costs. Since this single estimate was not confirmed by other State or utility commenters, the values were considered beyond the usual range of costs.

45 FR 58688  
Published 9/4/80

#### FEDERAL EMERGENCY MANAGEMENT AGENCY

**State Workshop for Review of Proposed "Final Issue of Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (NUREG-0654/FEMA-REP-1)**

**AGENCY:** Federal Emergency Management Agency (FEMA).

**ACTION:** Announcement.

FEMA is cooperating with the Nuclear Regulatory Commission in development of final criteria to be used in the preparation and evaluation of radiological emergency response plans and preparedness in support of nuclear power plants (NUREG-0654/FEMA-REP-1 issued for interim use and comment in January 1980). In conjunction with this, FEMA also has proposed on June 24, 1980, a rule, 44 CFR Part 350 (45 FR 42341) which will govern the FEMA approval of State and local radiological emergency plans and preparedness. These and other actions will provide guidance to govern the acceptability of planning and preparedness around commercial nuclear facilities.

Since being published for comment, the joint FEMA/NRC criteria has been commented upon by States, local governments, and the public. In response to these comments, and to information gained during the interim use period of the criteria, a number of modifications to the criteria are proposed.

FEMA, in cooperation with NRC, will hold a State workshop to discuss the criteria, after which it will be issued in final form. This workshop is being held to obtain the views of, and provide the opportunity for discussion among State officials; however, all sessions will be open to public attendance and observation on a space available basis. Information will also be provided about FEMA rulemaking.

The meeting will be held at the Sheraton Airport Hotel, Atlanta, Georgia, September 24, 25, and 26, commencing at 1:00 pm September 24, 1980.

Persons who wish further information about this workshop or who wish to observe should write Ms. Karol Bothamley, Southern States Energy Board, One Exchange Place, 2300 Peachford Road, Suite 1230, Atlanta, Georgia 30338, telephone (404) 455-8841.

#### GENERAL NOTICES

Dated at Washington, D.C. this twenty-eight day of August, 1980.

For the Federal Emergency Management Agency.

Robert T. Jaske,

*Acting Director, Radiological Emergency Preparedness Division.*

45 FR 61796

Published 9/17/80

#### INTERAGENCY WORKING GROUP ON A HAZARDOUS SUBSTANCES EXPORT POLICY

**Draft Report; Extension of Comment Period**

**AGENCY:** Interagency Working Group on a Hazardous Substances Export Policy.

**ACTION:** Extension of comment.

**SUMMARY:** The agency is extending its comment period on the draft report of the Interagency Working Group on a Hazardous Substances Export Policy which was previously published in the Federal Register of August 12, 1980 (45 FR 53754). This action is taken in response to public interest expressed in the matter and requests for an extended comment period.

**DATE:** Comments now due on or before October 13, 1980.

**ADDRESS:** Send comments to the Interagency Working Group on a Hazardous Substances Export Policy, c/o Esther Peterson, Special Assistant to the President for Consumer Affairs, 495 Old Executive Office Building, Washington, D.C. 20500.

**FOR FURTHER INFORMATION CONTACT:** Ed Cohen or Mark Goldberg at the Office of Consumer Affairs, at 202/456-6226 or Kitty Gilman or Jean Halloran of the Council on Environmental Quality at 202/395-5780.

Esther Peterson,

*Special Assistant to the President for Consumer Affairs and Chair Interagency Working Group on a Hazardous Substances Export Policy.*



## PETITIONS FOR RULE MAKING

45 FR 53834

Published 8/13/80

### 10 CFR Part 2

[Docket No. PRM-2-8]

#### **Practice Rules; Union of Concerned Scientists and Natural Resources Defense Council, Inc.; Denial of Petition for Rulemaking**

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Denial of petition for rulemaking.

**SUMMARY:** The Nuclear Regulatory Commission is hereby denying a petition for rulemaking (PRM-2-8) submitted by the Union of Concerned Scientists and the Natural Resources Defense Council, Inc. The petitioners had requested the Commission to amend its regulations to precede all proposed regulations by an advance notice of proposed rulemaking and treat staff proposals for regulations procedurally the same as those generated by members of the public.

**FOR FURTHER INFORMATION CONTACT:** Bruce A. Berson, Office of the Executive Legal Director, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Telephone (301) 492-7678.

**SUPPLEMENTARY INFORMATION:** The petition for rulemaking (PRM-2-8) submitted by the Union of Concerned Scientists and Natural Resources Defense Council, Inc. was part of a letter commenting upon certain amendments to 10 CFR Part 21, "Reporting of Defects and Noncompliance," adopted by the Commission on October 19, 1978 (43 FR 48621). Petitioners requested the Commission to adopt the following modifications in the policy applicable to consideration of regulatory actions:

1. All proposed regulations should be preceded by an advance notice of intent to develop a regulation.

2. Staff proposals for regulations should be treated no differently from those generated by the public—i.e., a staff submittal of a proposal to the Commission should trigger a Federal Register notice and opportunity for public comment on the staff proposal. Only after receipt of the public comment should the Commission take action on the proposal. The staff proposal could be treated as the proposed amendment, provided its publication did not represent a prejudgment of the merits by the Commission.

The petitioners' revised procedures for noticing and treating staff-proposed regulations are designed to prevent the

staff from acting in an "adversarial" fashion in its presentations to the Commission.

A notice of filing of the petition, requesting comments by August 6, 1979, was published in the *Federal Register* on June 6, 1979 (44 FR 32489). No letters of public comment were received regarding petitioners' suggestion to revise NRC procedures for handling staff-proposed regulations. (However, three persons did comment on the substance of the amendments to Part 21.) Both the petition and the comments are available for public inspection and copying at the NRC Public Document Room at 1717 H Street, N.W., Washington, D.C.

The Commission has carefully considered the two proposals—(1) that all proposed regulations should be preceded by an advance notice of proposed rulemaking, and (2) that staff proposals for regulations should be treated procedurally no differently than those generated by members of the public. For the reasons set forth below, the Commission has concluded that adoption of these proposals is unnecessary and is not in accordance with good administrative practice.

The procedures which the Commission follows in exercising its authority to promulgate rules and regulations are codified in §§ 2.800 through 2.808 of Title 10 of the Code of Federal Regulations. Under these procedures, which comply with the provisions of the Administrative Procedure Act (APA) applicable to rulemaking (5 U.S.C. 553), the Commission may initiate a rulemaking proceeding on its own initiative, on the recommendation of another Federal agency, or on the petition of any other interested person. The first step in most NRC rulemaking proceedings is publication in the *Federal Register* of a notice of proposed rulemaking; neither the APA nor the Commission's implementing rules requires publication of an advance notice of proposed rulemaking.

The petitioners' first proposal would require that all proposed regulations be preceded by an advance notice of intent to develop a regulation. The Commission's current practice is to publish advance notice of proposed rulemaking only when it deems it appropriate to do so. Such circumstances include matters on which the Commission desires early comments from potentially affected members of the public to assist it in determining the need for a rule, or, if a rule is necessary, the possible components and parameters of a subsequent rulemaking. Hence, the Commission considers an

advance notice of proposed rulemaking a useful tool to gauge public interest or obtain public assistance on certain issues in early stages of development.

It does not appear useful or appropriate for the Commission to require an advance notice in all cases. In most cases, the notice of a proposed rulemaking with opportunity for public comment is sufficient to gauge public interest in the proposal and to elicit suggestions relative to such rulemaking. In those matters where the Commission perceives a benefit to be derived from an advance notice, such as those mentioned above, the Commission has in the past exercised, and will continue to exercise, its discretionary authority to publish an advance notice of proposed rulemaking which seeks early advice from the public.<sup>1</sup> It should also be noted that the authority of the Commission extends in certain circumstances to issuing rules without prior notice and comment. While the APA (5 U.S.C. 553(b)(3) and (d)(3)) and the Commission's implementing rules (10-CFR 2.807) require that, in most cases, 30 days notice must precede the effective date of a rule, the APA and Commission rules do provide, in certain circumstances, for publication of immediately effective rules.

The petitioners' second proposal would require that the staff be treated no differently from the public in the procedures applicable to proposals for regulations. In effect this means that if the staff wished to propose a rulemaking to initiate a new rule or amend an existing one, it would do so by publishing its proposal in the *Federal Register* for public comment without prior Commission review and approval. This suggestion appears to misapprehend the nature and organization of the Nuclear Regulatory Commission and is inconsistent with accepted administrative agency practice.

It has long been recognized that the staff's expertise is central to and an inherent part of the execution of the agency's mission. The staff's advice is considered vital to effective regulation. Hence, pursuant to 10 CFR Part 1, "Statement of Organization and General Information," §§ 1.40-1.64, the staff is directed to recommend to the Commission proposed regulations in a variety of procedural and substantive areas. Only in certain delegated instances may the Executive Director for Operations issue, without prior

<sup>1</sup> The Commission believes this procedure is consistent with E.O. 12044 (43 FR 12661, March 23, 1978). The Commission has previously expressed full support for the basic objectives of the Executive Order which is to improve existing and future government regulations.

## PETITIONS FOR RULE MAKING

Commission review and approval, proposed amendments to regulations and amendments in final form.

Unless specifically authorized by the Commission to do otherwise, it is the staff's role to provide advice and expertise to the Commission. In the case of rulemaking, the Commission's review and approval of a recommendation that a proposed rulemaking be instituted (or that an advance notice of proposed rulemaking be published) does not mean that the matter has been finally decided. By assuring that proposed rules comport generally with Commission policy before they are approved for publication, the Commission does not prejudice the final rule (which may differ from the proposal as a result of comments received) but rather intends to achieve sound, effective, economical, and consistent agency practice.

Thus, pursuant to its statutory authority, the Commission reviews and approves staff action such as proposals for regulations prior to publication. The Commission is not aware of any Federal agency that treats staff proposals in the same manner as those generated by the public. The Commission considers it necessary and appropriate in the interest of proper leadership and conduct of agency business that there be ongoing coordination between the staff and the Commission in rulemaking matters.<sup>2</sup>

In view of the foregoing, the Commission denies the petition for rulemaking filed by UCS and NRDC on March 2, 1979. A copy of the Commission's letter of denial is available for public inspection and copying at the NRC Public Document Room at 1717 H Street, N.W., Washington, D.C.

45 FR 53936

Published 8/13/80

[Docket No. PRM-30-56]

**Gulf Nuclear, Inc.; Denial of Petition for Rulemaking**

**AGENCY:** U.S. Nuclear Regulatory Commission.

<sup>2</sup>On October 4, 1979 the Commission was provided a report entitled "Review of Delegations of Authority Within NRC" (dated September 1979) and in response to a recommendation of that report requested that a draft proposal be prepared to delegate substantial rulemaking powers to the Office of Standards Development and other staff offices.

**ACTION:** Denial of Petition for rulemaking.

By letter dated April 12, 1979, Mr. Walter P. Peeples, Jr. on behalf of Gulf Nuclear, Inc., filed with the Nuclear Regulatory Commission a petition for rulemaking.

### The Petition

The petitioner proposed that the Nuclear Regulatory Commission be divided into two separate entities—one area would cover power reactors, uranium mining, nuclear weapons manufacturing, nuclear fuel processors and any area that deals with fissile materials; the second area would deal with byproduct materials. (Note: Nuclear weapons manufacturing is a responsibility of the Department of Energy rather than the Nuclear Regulatory Commission.)

### Basis for Request

In support of his petition, Mr. Peeples stated five propositions that he felt were adequate justification for consideration of his proposal:

1. Fissile materials used in power production and the production of nuclear weapons require far more stringent rules than those required of byproduct material users and licensees. This includes regulations concerning shipment and use of these materials. Because the U.S. Nuclear Regulatory Commission is a single entity, all rules pertain to both types of licensees.
2. The majority of effort of the U.S. NRC is devoted to fissile materials creating enormous costs and efforts to control. The majority of the licensees are byproduct materials users who are forced to share the cost burden exhibited in U.S. NRC fees.
3. The staff and leadership of the U.S. NRC devotes the majority of its time to expended energy related to power reactors which creates undue burdens on byproduct materials users.
4. A division of responsibility by NRC would create a positive effect on the general public by making them aware that there are different types of radioactive materials, easing some of the political pressure on the NRC.
5. Because of the present makeup of NRC controlling both areas, the public apprehension toward power reactors has a tendency to force over-regulation of byproduct materials because both are jointly referred to as simply "radioactive materials". This detracts from the ability to point out the positive nature of public benefits derived from both types of materials. Since NRC fails to distinguish between the two types of materials, undue burdens in transportation and publicity force byproduct materials users to defend a position they are not totally familiar with. Petitions and regulations, including regulatory guides, are frequently opposed or incorrectly interpreted because of lack of distinction between the two types of materials.

In summary, the NRC staff responses are based on published statements related to (1) legislative mandates, (2) judicial guidelines, and (3) statutory responsibilities for regulating civilian nuclear activities. Many parts of the NRC rules are devoted to regulating production and utilization facilities, including nuclear reactors and facilities for processing irradiated special nuclear material. Other parts are devoted to regulating byproduct materials, source materials, or special nuclear materials. Several parts cover both fissile materials and other nuclear materials.

An example of this last case is the NRC's regulation, "Fees for Facilities and Materials Licenses and Other Regulatory Services Under the Atomic Energy Act of 1954, as Amended," 10 CFR Part 170. The fees charged for licensing and inspection services by the NRC are based on guidelines that determine whether or not the NRC may charge a fee for a particular service and what the maximum fee may be. The NRC is generally obliged to impose the fees allowed by the guidelines where it is fair and equitable to do so and is limited by the requirement that a consistent and fundamentally fair fee structure must accord equal treatment to similarly situated recipients of agency service for nuclear facilities, fissile materials, and other radioactive materials.

A copy of "NRC Staff Responses to Petitioner's Justification Statements) PRM 30-56," is available for public inspection at the Commission's Public Document Room at 1717 H Street NW., Washington, D.C. Single copies of the document may be obtained on request from the Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

### Request for Comments on Petition

A notice of filing of petition for rulemaking was published in the Federal Register on May 17, 1979 (44 FR 28896). The comment period expired July 18, 1979. Eleven letters of comment were received in response to the notice. Two of the letters opposed the proposal and nine letters supported the proposal.

Several persons commented generally that NRC regulations which cover both fissile materials and byproduct materials result in administrative burdens, confusion, and added costs for byproducts materials users. Application of pertinent NRC regulatory requirements in a graded approach, i.e., applied to an extent consistent with their importance to safety, can reduce burdens and costs for persons complying with the requirements. In many instances, the NRC's regulations

## PETITIONS FOR RULEMAKING

grant relief from safeguards reporting requirements for small quantities of byproduct material and grant relief from both safeguards and criticality safety controls for small quantities of fissile material.

Two persons commented on the costs of NRC licensing and inspection fees and the beneficiaries of NRC services. Fees associated with fissile material licensing and inspection activities (and all other fee categories) are based on the sum on the average of the direct and indirect costs that the NRC incurs in furnishing the services for a member of the class of identifiable recipients for which the fees are assessed. Excluded from consideration for recovery are budgeted regulatory costs that are part of a program conducted on behalf of the public.

One person expressed the opinion that the inclusion of 10 CFR Part 34, "Licenses for Radiography and Radiation Safety Requirements for Radiographic Operations," within the scope of 10 CFR Part 21, "Reporting of Defects and Noncompliance," is not necessary. The NRC's regulations in 10 CFR Part 21 implement section 206 of the Energy Reorganization Act of 1974, as amended. Part 21 requires, among other things, that information reasonably indicating that a licensed activity or basic component supplied to such activity fails to comply with the Atomic Energy Act of 1954, as amended, or any applicable rule, regulation, order, or license of the NRC relating to substantial safety hazards, or contains a defect which could create a substantial safety hazard should be reported. Incident and overexposure reporting requirements had been in existence in Commission regulations for a number of years before enactment of the Energy Reorganization Act of 1974 (which contains section 206) in October 1974.

That person also expressed the opinion that the inclusion of industrial radiography licensees in 10 CFR 71.12, "General License for Shipment in DOT Specification Containers, in Packages Approved for Use by Another Person, and in Packages Approved by a Foreign National Competent Authority," is not necessary. It is the general licensees delivering licensed radioactive material to a carrier for transport under the authority of 10 CFR 71.12(b) who must assure themselves and the NRC that the subject packages are as described in the packages approvals and that they are used, tested, and maintained in accordance with both the general and specific portions of an approved quality assurance program. (The NRC must exercise its regulatory authority through its general licensees who use package approvals because the NRC has no

general enforcement powers over package manufacturers or package owners unless they possess and use licensed radioactive material. They would, however, be subject to 10 CFR Part 21, "Reporting of Defects and Noncompliance.")

A copy of "Abstracts of Comments and Staff Responses: Proposal that Nuclear Regulatory Commission Be Divided into Two Separate Entities—Docket No. PRM 30-58," is available for public inspection at the Commission's Public Document Room at 1717 H Street NW., Washington, D.C. Single copies of the comment analysis may be obtained on request from the Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

### Assigned Functions

The Energy Reorganization Act of 1974, as amended, was enacted by the Congress and approved as Public Law 93-438 on October 11, 1974.

Title II of that Act established the Nuclear Regulatory Commission and transferred to the Nuclear Regulatory Commission all the licensing and related regulatory functions of the Atomic Energy Commission.

In assigning those functions within the Nuclear Regulatory Commission, the Congress not only distinguished between nuclear reactors and other licensed facilities and nuclear materials, but also gave due and proper emphasis to functions which are vital to the public health and safety and the safe and efficient operation of both nuclear reactors and other licensed activities.

Sec. 203(b) of that Act provides that the Director of Nuclear Reactor Regulation shall perform such functions as the Commission shall delegate including principal licensing and regulation involving all facilities and materials licensed under the Atomic Energy Act of 1954, as amended, associated with the construction and operation of nuclear reactors licensed under the Atomic Energy Act of 1954, as amended.

Sec. 204(b) of the Energy Reorganization Act of 1974, as amended, provides that the Director of Nuclear Material Safety and Safeguards shall perform such functions as the Commission shall delegate including principal licensing and regulation involving facilities and materials licensed under the Atomic Energy Act of 1954, as amended, associated with the processing, transport, and handling of nuclear materials, including the provision and maintenance of safeguards against threats, theft, and sabotage of such licensed facilities and materials. The Nuclear Regulatory Commission has used the flexibility provided by Sec. 204(b) of the Energy

Reorganization Act of 1974, as amended, to establish within the Office of Nuclear Material Safety and Safeguards the Division of Fuel Cycle and Material Safety to perform those licensing and regulatory activities which pertain to the processing, transport, and handling of nuclear materials off the nuclear reactor site.

The Energy Reorganization Act of 1974, as amended, provides no authority under which the Nuclear Regulatory Commission, on its own initiative, may transfer any licensing or related regulatory function to a new or established agency of the Federal Government.

### Alternative Organization Forms

Alternative organization forms for nuclear regulation have been considered in recent studies conducted on or for the Nuclear Regulatory Commission.

Sec. 306 of the Energy Reorganization Act of 1974, as amended, required the Comptroller General of the United States to audit, review, and evaluate the implementation of the provisions of Title II of that Act by the Nuclear Regulatory Commission not later than sixty months after the effective date of that Act and submit to the Congress a report on his audit.

In the Comptroller General's report to Congress, "The Nuclear Regulatory Commission: More Aggressive Leadership Needed," EMD-80-17, dated January 15, 1980, the General Accounting Office (GAO) identified an alternative (separating NRC into separate policymaking and regulatory agencies) similar to the petitioner's proposal.

GAO noted that separation of NRC into two agencies could build on the strengths of both the commission and the single administrator forms of nuclear regulation. Policymaking on critical unresolved nuclear regulation issues could continue under the commission form with the advantage of multimember deliberations. At the same time, day-to-day regulation of nuclear activities could proceed under an agency headed by a single administrator with prospects for better management of these day-to-day activities.

GAO discussed this alternative with a cross-section of people knowledgeable of nuclear regulation, including representatives of Government, the nuclear industry, public interest groups, and academia. Opinion on the alternative ranged from active interest to a belief that it represents an unnecessary proliferation of Federal regulatory agencies.

GAO chose not to recommend any alternative to strengthening the present commission because none of the alternative forms appeared to have a

## PETITIONS FOR RULE MAKING

clear-cut advantage. In conclusion, GAO stated:

Ultimately, the Congress must consider the advantages and disadvantages of various organizational forms and decide on the organizational structure which, on balance, best represents what the Congress wants for nuclear regulation.

### Grounds for Denial

The Commission has given careful consideration to petition for rule making PRM 30-56 and the public comments received thereon and has decided to deny the petition on the grounds that, given the structure of the Energy Reorganization Act of 1974, as amended, it is clear that Congress intended the newly created Nuclear Regulatory Commission to have licensing and related regulatory authority not only over nuclear reactors, uranium milling, nuclear fuel processing and reprocessing, and other areas dealing with fissile materials but also have this same authority over byproduct materials. The NRC itself cannot "... separate the United States Nuclear Regulatory Commission into two separate entities..." Such a separation could only be accomplished in either of two ways: (1) enactment of legislation by the U.S. Congress, the method by which the existing NRC was created; or (2) through implementation of an Executive Reorganization Plan pursuant to 5 U.S.C. 901 *et seq.*

A copy of the petition for rule making and copies of the letters of comment and the Commission's letter of denial are available for public inspection at the Commission's Public Document Room at 1717 H Street NW., Washington, D.C.



## REGULATORY GUIDES

| Number  | Title                                                                                                                                     | Date  | Revision |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|
| I.143   | Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants | 10/79 | 1        |
| I.144   | Auditing of Quality Assurance Programs for Nuclear Power Plants<br><i>(Comments requested by 3/30/79)</i>                                 | 1/79  |          |
| I.145   | Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants                                      | 8/79  |          |
| ➤ I.146 | Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants                                                       | 8/80  |          |

## REGULATORY GUIDES

### DIVISION 2 REGULATORY GUIDES RESEARCH AND TEST REACTORS

| Number | Title                                                                                                  | Date  | Revision |
|--------|--------------------------------------------------------------------------------------------------------|-------|----------|
| 2.1    | Shield Test Program for Evaluation of Installed Biological Shielding in Research and Training Reactors | 5/73  |          |
| 2.2    | Development of Technical Specifications for Experiments in Research Reactors                           | 11/73 |          |
| 2.3    | Quality Verification for Plate-Type Uranium-Aluminum Fuel Elements for Use in Research Reactors        | 7/76  | 1        |
| 2.4    | Review of Experiments for Research Reactors                                                            | 5/77  | 0-R      |
| 2.5    | Quality Assurance Program Requirements for Research Reactors                                           | 10/77 | 0-R      |
| 2.6    | Emergency Planning for Research Reactors<br>(comments requested by 4/6/79)                             | 1/79  |          |

## REGULATORY GUIDES

| Number | Title                                                                                                                                                      | Date | Revision |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|
| 5.56   | Standard Format and Content of Safeguards Contingency Plans for Transportation                                                                             | 3/78 |          |
| 5.57   | Shipping and Receiving Control of Special Nuclear Material                                                                                                 | 6/76 | 1        |
| 5.58   | Considerations for Establishing Traceability of Special Nuclear Material Accounting Measurements ( <i>Comments requested by 1/19/79</i> )                  | 2/80 | 1        |
| 5.59   | Standard Format and Content for a Licensee Physical Security Plan for the Protection of Special Nuclear Material of Moderate or Low Strategic Significance | 1/80 |          |
| 5.60   | Standard Format and Content of a Licensee Physical Protection Plan for Strategic Special Nuclear Material in Transit                                       | 4/80 |          |
| 5.61   | "Intent and Scope of the Physical Protection Upgrade Rule Requirements for Fixed Sites"                                                                    | 7/80 |          |

## REGULATORY GUIDES

### DIVISION 6 REGULATORY GUIDES PRODUCTS

| Number | Title                                                                                                                                               | Date  | Revision |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|
| 6.1    | Leak Testing Radioactive Brachytherapy Sources                                                                                                      | 7/74  | 1        |
| 6.2    | Integrity and Test Specifications for Selected Brachytherapy Sources                                                                                | 7/74  | 1        |
| 6.3    | Design, Construction, and Use of Radioisotopic Power Generators for Certain Land and Sea Applications                                               | 3/74  |          |
| ➤ 6.4  | Classification of Containment Properties of Sealed Radioactive Sources Contained in Certain Devices to be Distributed for Use Under General License | 8/80  | 2        |
| 6.5    | General Safety Standard for Installations Using Non-medical Sealed Gamma-Ray Sources                                                                | 6/74  |          |
| 6.6    | Acceptance Sampling Procedures for Exempted and Generally Licensed Items Containing Byproduct Material                                              | 6/74  |          |
| 6.7    | Preparation to an Environmental Report to Support a Rule Making Petition Seeking an Exemption for a Radionuclide-Containing Product                 | 6/76  | 1        |
| 6.8    | Identification Plaque for Irretrievable Well-Logging Sources<br>(comments requested by 12/11/78)                                                    | 10/78 |          |



## REGULATORY GUIDES

| Number | Title                                                                                                                       | Date  | Revision |
|--------|-----------------------------------------------------------------------------------------------------------------------------|-------|----------|
| 8.23   | Radiation Safety Surveys at Medical Institutions ( <i>comments requested by 4/12/79</i> )                                   | 2/79  |          |
| 8.24   | Health Physics Surveys During Enriched Uranium-235 Processing and Fuel Fabrication ( <i>Comments requested by 1/25/79</i> ) | 10/79 | 1        |
| ➤ 8.25 | Calibration and Error Limits of Air Sampling Instruments for Total Volume of Air Samples                                    | 8/80  |          |

## REGULATORY GUIDES

### DIVISION 9 REGULATORY GUIDES ANTITRUST AND FINANCIAL REVIEW

| Number | Title                                                                                                                                                   | Date  | Revision |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|
| 9.1    | Regulatory Staff Position Statement on Antitrust Matters                                                                                                | 12/73 |          |
| 9.2    | Information Needed by the NRC Staff in Connection<br>With Its Antitrust Review of Construction Permit<br>Applications for Nuclear Power Plants          | 6/76  | 1        |
| 9.3    | Information Needed by the NRC Staff in Connection<br>With Its Antitrust Review of Operating License<br>Applications for Nuclear Power Plants            | 10/74 |          |
| 9.4    | Suggested Format for Cash Flow Statements Submitted as Guarantees<br>of Payment of Retrospective Premiums ( <i>comments requested by<br/>11/20/78</i> ) | 9/78  |          |

## PART 2 • STATEMENTS OF CONSIDERATION

the next morning costs about \$1,000; supplementary copies cost about \$100. In the S-3 proceeding, transcripts were requested by most public interest groups, industry representatives and utilities. The principal conclusion that can be drawn from that proceeding is almost self-evident, namely, that NRC's offer to provide an expensive service (transcripts) is attractive to most parties. These parties, in turn, can better assist the Commission in arriving at its decisions.

There is no reason why free transcripts could not be made available in adjudications to parties, other than the applicant, at the same time and location as they are made available to the NRC staff. If transcripts are mailed to the staff, they would also be mailed to intervenors. This service could replace present practice where members of the staff or the Licensing Board frequently lend an intervenor an extra copy of the transcript, although on a necessarily irregular basis. Transcripts are particularly important to the many intervenors who attempt to make their cases on cross examination.

Therefore, the Commission has decided to initiate a one-year pilot program to provide free transcripts on the basis previously described. Licensing Boards will have the discretion to control the distribution of transcripts to parties—for example, to limit distribution to some but not all of a consolidated group of intervenors, or to only those phases of a hearing in which an intervenor intends to participate.

### NRC Provision of Free Copying and Service

Most licensing proceedings produce dozens of filings. It should be noted that, frequently, parties in complex proceedings routinely serve more people than necessary. Particularly in those proceedings in which certain aspects of an issue have been heard before all levels of NRC adjudicatory boards, parties tend to compile service lists which reflect the entire history of the proceeding, rather than being tailored to the particular paper being filed. Random checks of service lists show that this sort of error accounts for between 3 and 7 extra copies made and distributed. The Commission wishes to emphasize that parties should be aware that service is required only on the Commission or the pertinent adjudicatory board and the parties, and that parties endeavoring to hold down their costs should carefully monitor their service lists.

In December 1977, the Commission authorized the Docketing and Service Branch to copy and serve submissions in

the S-3 proceeding, if requested to do so by parties to the proceeding. Each party requesting this assistance served an original and two copies on NRC. Others followed normal procedures, namely, service on other parties and an original plus 20 copies on NRC.

The results show that the availability of free copying and service had no discernible impact on the length or frequency of filings with the Commission. Concern had been expressed that free service would encourage abuses in the form of overlong, unedited or unnecessary filings. In general, for those who ultimately requested copying and service, there were no significant differences in length or frequency between filings copied and served by the parties themselves and those copied and served by NRC at a party's request.

This experience suggests that a program of free NRC copying and service is not likely to be abused. The Commission does not wish to assume this responsibility for all classes of documents, since this would create substantial delay. It has, however, identified several categories of documents which are bulky, but do not arise frequently. Their service by the Commission would thus relieve parties of a substantial burden without introducing substantial delay. These categories are: (1) testimony (including attachments), (2) proposed findings of fact and conclusions of law, and (3) responses to discovery requests. In relative terms, service of these documents need not be as rapid as items such as briefs or motions. A rough look at filings in licensing proceedings, indicates that these documents tend to be relatively bulky. Also, documents containing testimony and exhibits contain substantive contentions and are, in effect the "essence" of NRC proceedings. By processing them, NRC would be copying and serving a substantial amount of the number of pages filed, a service which would have high payoff in terms of reducing costs to intervenors, without substantially impeding the progress of the adjudicatory process.

Copying and service of these documents by the commission may cause some very small delay in the hearing process. A licensing proceeding may require several rounds of testimony and an opportunity to file proposed findings of fact and conclusions of law. (Responses to discovery requests are also filed, but not on a tight time schedule.)

At least five days would be required for each set of documents to reach the Commission and be copied and mailed

to the parties and board members. Therefore, the rule provides that documents filed with Docketing and Service in the three categories previously described should be filed not less than five days before the date at which they are submitted to an adjudicatory board, unless the presiding officer provides otherwise.

On balance, the Commission has decided to undertake a one-year pilot program of free copying and service. Copying and service have been requested by intervenors in a number of instances and the value of the assistance, both to intervenors and the quality of Commission decisionmaking, may be worth the modest delay entailed. A one-year pilot program would allow NRC to obtain information on this effort and on any problems such a program may present, as well as answer whether NRC copying and service of testimony is an incentive to timely filing.

### Filing of 20 Copies with the Commission

Parties in licensing proceedings, under 10 CFR 2.708(d), file or serve documents as follows: the original and 20 copies with the Commission, and one copy on each party and on members of the hearing panel in question. The 20 copies filed with Docketing and Service are for the Commission's convenience for internal informational distribution; the appropriate Board and the parties are served separately.

These 20 copies are not adequate for internal NRC distribution needs. In practice, Docketing and Service distributes some copies upon receipt; making additional copies creates a time lag of up to several days. Since the copies Docketing and Service sends out are informational, the Commission perceives no tight time constraint on internal information distribution; the normal time lag necessary to allow NRC to do all copying of internal distribution documents would not cause inconvenience. Therefore, the Commission has decided that all parties, including applicants, need file with the Commission only an original and two copies: the original would go to the docket file, one copy would go directly to the Public Document Room, and the other copy would be used for reproduction.

### Antitrust Proceedings

NRC will not provide free transcripts and free copying and service in antitrust proceedings. The studies of filings have been confined to health, safety, and environmental licensing proceedings. While the Commission believes that the changes would substantially assist intervenors in those proceedings without introducing substantial delay, it does

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not know whether these conclusions can be extended to antitrust proceedings. There may be, in fact, substantial differences in the extent and general bulk of discovery between the two kinds of proceedings. In addition, the Commission does not know whether parties in antitrust proceedings are likely to need such assistance as intervenors in health, safety, and environmental proceedings.

Consequently, the Commission will investigate this area further before making any changes.

Because these amendments relate solely to agency procedure and practice, the Commission has found that good cause exists for omitting notice of proposed rulemaking, and public procedure thereon, as unnecessary, and for making the amendments effective immediately without the customary 30 days notice.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of Title 5 of the United States Code, the following amendments to Title 10, Chapter 1, Code of Federal Regulations, Part 2 is published as a document subject to codification.

➤ 45 FR 62067  
Published 9/18/80  
Effective 9/18/80

### Rules of Practice; Special Assistants Used by Atomic Safety and Licensing Boards

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is amending its "Rules of Practice" to permit NRC Atomic Safety and Licensing Boards to use special assistants to be drawn from the membership of the Atomic Safety and Licensing Board Panel. The special assistants may be allowed to participate as technical interrogators, alternate Atomic Safety and Licensing Board members, special masters (with consent of the parties), or consultants. The purpose of the amendments is to facilitate the hearing process and improve the quality of the record produced.

**DATE:** The rule shall be effective September 18, 1980.

**FOR FURTHER INFORMATION CONTACT:** Mark E. Chopko, Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC, 20555 (telephone 202/634-3224); Bruce A. Berson, Office of the Executive Legal Director, U.S. Nuclear Regulatory Commission, Washington, DC, 20555 (telephone 301/492-7678).

**SUPPLEMENTARY INFORMATION:** In 1979, the Commission appointed a Task Force to study the use of part-time members of the Atomic Safety and Licensing Board Panel (referred to herein as ASLBP) and recommend any necessary or desirable changes regarding the use of those employees. In October 1979, the Task Force published its report and based on its surveys and interviews reached a series of findings with respect to them. Part-time ASLBP members provide the NRC access to a wide variety of expertise that could not be duplicated in a full-time staff except at considerable expense to the Government. Part-time members also offered a greater range of viewpoints on the ASLBP and more ready access to current knowledge in a particular field. Further, part-time members have aided the public perception of objectivity in the NRC licensing process. For all these reasons, the Task Force concluded that part-time ASLBP members are an important asset to the NRC. Rather than lose the benefits of those employees as hearings grew longer and more intensive, the Task Force specifically recommended that the Commission explore the use of part-time ASLBP members as "special assistants" to the Boards, to serve as "technical interrogators," "alternate board members," "special masters," or "consultants" to aid the hearing process and improve the quality of the record produced. On January 23, 1980, the Commission published proposed rules for comment in response to those recommendations. 45 FR 5308. Each aspect of the proposed rules is described below.

Only two comments were received. While generally agreeing with the thrust of the rules, both raised questions about the proposed amendments to permit "alternate board members" and "special masters." In large measure, the commentators objected to both the master and the alternate member, arguing that the Atomic Energy Act does not contemplate more than three members to a licensing board (42 U.S.C. 2241(a)), that the Administrative Procedure Act (5 U.S.C. 551 *et seq.*) does not contemplate this arrangement or permit delegation of the hearing function

(including that of the presiding officer or decisionmaker), and that the Licensing Board should not entertain "expert" viewpoints not subject to cross-examination. The Commission has examined these comments in light of the specific statutory provisions noted and, while it does not agree with much of the arguments raised, concludes that the proposed rule on use of "special masters" should be modified to provide for their use only on consent of the parties. No fundamental change is necessary to the proposed rule on alternate board members but a more clear explanation of their role is provided.

The Atomic Energy Act amendments that added section 191 (42 U.S.C. 2241) contemplated that a three-member board would preside at licensing hearings in lieu of a single hearing examiner. Those amendments also provided that one member should be "qualified in the conduct of administrative proceedings," that is, a lawyer, who by custom has been the Chairperson of the Licensing Board. In addition, the Administrative Procedure Act generally contemplates that the person who presides over the reception of the evidence should make the decision, although this is not required in determining applications for initial licenses and in certain other types of cases. The use of special masters without the consent of the parties, as contemplated in the proposed rule (10 CFR 2.722(a)(2)) arguably could violate these principles by having a technical

expert hear the evidence and "preside" at that hearing, weigh credibility and decide major, perhaps crucial, issues in a case, and then recommend a decision. Requiring *de novo* review by the Licensing Board or some alternative where a party may sponsor the master's report subject to the other party's objections or comments might cure these defects but would effectively delay the proceeding, waste resources, and offset the advantages that would be expected from use of the special master. Since parties may consent to procedures which differ from those statutorily provided, and since the Commission believes that a "special master" could be invaluable in developing the record and conserving Board time, the Commission will modify the proposed rule to provide that a special master may be used with consent of the parties. *Cf. Toledo Edison Co., et al. (Davis-Besse Nuclear Power Station), ALAB-300, 2 NRC 752 (1975)* (describing the use of a master with consent of the parties to rule on privilege objections to documents sought by party discovery in an antitrust proceeding).



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On the other hand, the use of an "alternate board member" <sup>1</sup> does not arguably violate the statutory principles discussed above. The use of an alternate board member will not require a separate hearing or proceeding as would use of a special master. The alternate board member will sit with the three-member licensing board, will ask questions, comment upon testimony and provide his advice on the record and in the presence of the parties to the licensing board. The licensing board will still preside at the reception of the evidence, will still rule on issues of credibility and admissibility and will decide all issues in the case. The recommended decision of the alternate board member will be made on-the-record with an opportunity for the parties to comment thereon. The licensing Board Panel's practice of avoiding off-the-record communications between the Board and other Panel members on any fact in issue will apply to communications between the Board and the alternate after the alternate's report has been received. Thus no party will lose any statutory rights and each party will be given an opportunity to provide views and comments on the alternate member's reports to the Licensing Board. In addition, that party aggrieved by any decision of the Board, based in part on an alternate member's decision, will have an opportunity to appeal that decision to the Atomic Safety and Licensing Appeal Board. Thus the Commission believes that no changes are necessary to the proposed rule on use of alternate board members as clarified above.

The Commission adopts final rules on the use of part-time ASLBP members as follows:

Section 2.722(a)(1) provides for technical interrogators who may assist the presiding officer during the hearing by examining witnesses. The interrogator will play no part in the decision and will provide no advice to the Board. No changes are necessary to the proposed rules. See 45 FR 5308.

Section 2.722(a)(2) authorizes special masters to hear evidentiary presentations by the parties on specific technical matters and, upon completion of the presentation of evidence, to prepare a report that would become part of the record. Such use shall be upon

consent of all the parties. The parties will have an opportunity to comment upon the report and may appeal evidentiary rulings to the presiding officer. The presiding officer will retain final decisionmaking authority over the issues heard and reported on by the special master. The proposed rule is modified to provide for consent of the parties.

Section 2.722(a)(3) authorizes an alternate board member to participate in that portion of the proceeding relating to his or her area of expertise and to report conclusions to the presiding officer. The alternate board member, as clarified above, shall ask questions, provide advice and provide a written record of his advice to the Board. However, the three-member Board shall preside at all sessions and rule on all questions of evidence and other motions directed during that portion of the proceeding. The Board shall also retain all decisionmaking authority. With the explanation provided in this supplementary information, no changes are necessary.

Section 2.722(b) authorizes consultants to brief the Board as described in the proposed rule. In addition, modifications to existing Sections 2.718 and 2.719 shall be made as described in the proposed rule. No changes are necessary to either of these proposals. 45 FR 5308. A minor change to the proposed addition to Part 2, Appendix A has been made to avoid confusion in the use of the term "alternate board member" with the term "alternate" in 10 CFR 2.721(b).

Because the final rules are not substantive and relate only to matters of Board procedure and do not require any change in conduct on the part of any party, the rules are effective immediately when published in the Federal Register 5 U.S.C. 553(d). Licensing Boards, however, engaged in licensing hearings when the rule becomes effective should solicit the views of the parties before first using a special assistant.

<sup>1</sup> The term "alternate board member" as a "special assistant" should not be confused with use of the term "alternate" in 10 CFR 2.721(b). In the latter situation the "alternate" is a substitute for a member of a Board who becomes unavailable. See generally *New England Coalition on Nuclear Pollution v. NRC*, 582 F.2d 87, 99-100 (1st Cir. 1978). In this rule (10 CFR 2.722(a)(3)), the "alternate" sits with the three-member Board and not instead of the Board or any of its members.



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requirement of Pub. L. 96-106, there is a need to revoke certain of the immediately effective rules (viz., §§ 40.2a, 40.26(b)(2), and 150.15(a)(7)) which were published in the August 24 **Federal Register** notice (44 FR 50012).

It should be noted, however, that the effective regulations granting a general license for possession of such byproduct material to NRC licensees in non-Agreement States are not revoked. These regulations remain necessary to prevent licensees from being in technical violation of UMRCA's requirements concerning byproduct material licenses from the NRC.

The Commission finds that because the §§ 40.2a, 40.26(b)(2), and 150.15(a)(7) are in conflict with the requirements of Pub. L. 96-106, they must be revoked immediately. Because these regulations no longer have any basis in law, good cause exists pursuant to 5 U.S.C. 553 to waive the 30-day comment period, as impracticable and contrary to the public interest, and make the following amendments immediately effective.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, the Uranium Mill Tailings Radiation Control Act of 1978, as amended by the Surface Transportation Assistance Act of 1978 (Pub. L. 96-106), and sections 552 and 553 of Title 5 of the United States Code, the following amendments to Title 10, Parts 40 and 150, Code of Federal Regulations, are published as a document subject to codification.

45FR14199

Published 3/5/80

Effective 3/5/80

*Minor and Clarifying Amendments*

See Part 1 Statements of Consideration

45 FR 18905

Published 3/24/80

Effective 3/24/80

*Deletion of Reference to Panama Canal Zone; Minor Amendments*

See Part 4 Statements of Consideration.

45 FR 50705

Published 7/31/80

Effective 7/31/80

*Safeguards on Nuclear Material-*

*Implementation of US/JAEA Agreement*

See Part 75 Statements of Consideration.

➤ 45 FR 55419

Published 8/20/80

Effective 9/19/80

### 10 CFR Part 40

#### Deletion of Source Material Medicinals From the General License for Small Quantities of Source Material

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is amending its licensing regulations by deleting the provision for general license authorization of the use of source material<sup>1</sup> in humans by physicians, pharmacists, and other persons receiving source material in the form of medicinals or drugs. Thorotrast, containing alpha-emitting thorium-232 dioxide, was the only source material medicinal used in humans. However, as the radiobiological hazards of alpha-emitting radionuclides became known, the product fell into disuse and production of Thorotrast was discontinued in 1965. This action will require authorization by means of an NRC specific license for internal or external administration of source material, or the radiation therefrom, to human beings.

**EFFECTIVE DATE:** September 19, 1980.

**FOR FURTHER INFORMATION CONTACT:** Deborah A. Bozik, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Telephone 301-443-5860).

#### SUPPLEMENTARY INFORMATION:

Thorotrast, authorized for use by the general license in § 40.22, "Small quantities of source material," of 10 CFR Part 40, and used as an X-ray contrast agent, has been the only source material utilized as a medicinal; no other thorium or uranium compounds have been used as source material medicinals. Thorotrast is the colloidal dioxide of thorium-232 which is an alpha-emitting radionuclide. As the radiobiological hazards of these radionuclides became apparent, the carcinogenic potential of Thorotrast became evident, and, in 1965,

the production of Thorotrast was stopped. Improvements in X-ray machines and imaging techniques have resulted in Thorotrast being replaced with nonradioactive contrast agents. The Food and Drug Administration (FDA) terminated the approved New Drug Application (NDA) for Thorotrast on June 13, 1977.

NRC and FDA both strive for consistency with respect to each other's regulations. On March 6, 1980, NRC published a proposed rule (45 FR 14589) to amend the general license in § 40.22 by deleting the authorization for the

following persons to use and transfer small quantities of source material:

- (1) Pharmacists using source material solely for compounding medicinals;
- (2) Physicians using source material for medicinal purposes; and
- (3) Persons receiving possession of source material from pharmacists and physicians in the form of medicinals or drugs.

Under the proposed rule, the following groups would still retain their authorization under this general license to use small quantities of source material for research, development, educational, commercial or operational purposes:

- (1) Commercial and industrial firms;
- (2) Research, educational and medical institutions; and
- (3) Federal, State and local government agencies.

A new paragraph would be added under the proposed rule to the general license in § 40.22 of 10 CFR Part 40 which would prohibit licensees from administering source material, or the radiation therefrom, either internally or externally, to human beings, except where authorized by an NRC specific license.

The public was invited to submit written comments on the proposed rule by May 6, 1980. Eight comments were received, and all supported the proposed amendment. One commenter qualified his support by inquiring if the people whose authorization is being withdrawn by this amendment have been making other use of source material. To the best of the Commission's knowledge, no one in the affected groups has been using source material since Thorotrast production was discontinued in 1965. Therefore, the Commission is adopting the final rule in the form identical to the proposed amendment.

Under the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendment to Title 10, Chapter 1, Code of Federal Regulations, Part 40 is published as a document subject to codification.

<sup>1</sup> Source material, as defined in 10 CFR 40.4(h) means, among other things, uranium or thorium, or any combination thereof, in any physical or chemical form.





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45 FR 30614  
Published 5/9/80  
Effective 7/22/80

### 10 CFR Part 50

#### Periodic Updating of Final Safety Analysis Reports

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is amending its regulations to require each person licensed to operate a nuclear power reactor to submit periodically to the Commission revised pages for its Final Safety Analysis Report (FSAR). These revised pages will indicate changes which have been made to reflect information and analyses submitted to the Commission or prepared as a result of Commission requirement. The amendment is being made to provide an updated reference document to be used in recurring safety analyses performed by the licensee, the Commission, and other interested parties.

**EFFECTIVE DATE:** July 22, 1980.

**Note.**—The Nuclear Regulatory Commission has submitted this rule to the Comptroller General for such review as may be appropriate under the Federal Reports Act, as amended, 44 U.S.C. 3512. The date on which the reporting requirement of this rule becomes effective, unless advised to the contrary, accordingly, reflects inclusion of the 45-day period which that statute allows for such review (44 U.S.C. 3512(c)(2)).

**FOR FURTHER INFORMATION CONTACT:** Mr. Morton R. Fleishman, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, telephone 301-443-5921.

**SUPPLEMENTARY INFORMATION:** On November 8, 1976, the Nuclear Regulatory Commission published in the *Federal Register* (41 FR 49123) a notice of proposed rule making inviting written suggestions or comments on the proposed rule by December 23, 1976. A notice of correction and extension of comment period was published in the *Federal Register* on December 27, 1976 (41 FR 56204) in which the comment period was extended to January 26, 1977. The notices concerned proposed amendments to 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to require each applicant for, or holder of, a power reactor operating license which would be or was issued after January 1, 1963 to submit periodically to the Commission revised pages for its Final Safety Analysis Report (FSAR). These revised pages would indicate changes made in the facility or the procedures for its

operation and any analyses affected by these changes. Thirty-one persons submitted comments regarding the proposed amendments. The commenters could be roughly divided into three groups with seventeen supporting the rule with comments, eleven opposed to the rule, and three neutral. Copies of the comments received may be examined in the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C.

The substantive areas of comment can be categorized generally as follows:

1. Clarification of Rule
2. Applicability of Rule
3. Content of FSAR
4. Scope of Rule
5. Timing of Submittals
6. Relation of Rule to Other Rules and Reports
7. Legal Status of Updated FSAR
8. Cost/Benefit of Rule

In response to the comments received, the Commission is modifying the rule to (a) extend its applicability to all power reactors licensed to operate, (b) exclude applicants for operating licenses, (c) clarify the wording of the rule, (d) reduce its impact on power reactor licensees by relaxing some of the time requirements, and (e) require the initial revision to be a complete FSAR.

When the proposed rule was published for public comment, its applicability was limited to those plants licensed after January 1, 1963 in order to exempt five (5) older facilities. The Commission believed that it would not be feasible for these licensees to implement the rule because there is no integrated document comparable to an FSAR for their facilities. Since publication of the proposed rule, the Commission has initiated a program in which the NRC staff is making a systematic safety evaluation of eleven (11) nuclear power facilities licensed for operation before 1972. The purpose of this systematic evaluation program (SEP) is to determine and document the degree to which the eleven (11) facilities meet current licensing requirements for new plants. Of the five (5) plants licensed prior to January 1, 1963 that are still licensed to operate, three (3) are included in the SEP. The remaining two (2) plants, which presently are shut down, will be subject to the provisions of the rule as long as their licenses authorize operation.

The licensees participating in the SEP probably will be requested to supply a considerable amount of information during the program. Requiring them, in addition, to update their FSARs could prove to be excessively burdensome and could result in duplication of reports.

<sup>1</sup> The two facilities are Indian Point Unit No. 1 and Humboldt Bay Unit No. 3.

The information generated during the program and the manner in which it is collated will result in a completed FSAR at the conclusion of the program. For these reasons licensees of facilities being subjected by the NRC to a systematic evaluation program will not be required to comply with the provisions of this rule until they are notified by letter by the NRC's Director of the Office of Nuclear Reactor Regulation that, for their particular facility, the program has been completed. Because of the considerations just mentioned, that part of the proposed rule which limited the applicability to facilities licensed after January 1, 1963 has been deleted and the rule will apply to all power reactors licensed to operate.

The FSAR required to be updated by the rule is the original FSAR submitted as part of the application for the operating license. It would not include the subsequent supplements and amendments to the FSAR or the license that may have been submitted either in response to NRC questions or on the applicant's or licensee's own initiative following the original submittal. These various supplements and amendments must be appropriately incorporated into the original FSAR to create a single, complete and integral document. The initial revision to be filed should contain those pages from the originally submitted FSAR that are still applicable plus new replacement pages that appropriately incorporate the effects of supplements, amendments and other changes that have been made. This will result in a single, complete document being filed, that can then serve as the baseline for future changes.

Commenters have asked about the proper format to be used when making the FSAR submittal. Since the format of the FSAR is not covered by regulation, the rule does not specify a particular format. The NRC staff has provided guidance for the preparation of FSARs in Regulatory Guide 1.70, Revision 2, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants." However, many FSARs were developed prior to any specific guidance on format. The format to be used for the FSAR revisions is the option of the licensee, but the Commission expects that the format will probably be the same as the format of the original FSAR. No analyses other than those already prepared or submitted pursuant to NRC requirements (either originally with the application, or as part of the operating license review process, or as required by § 50.59 or other NRC requirement, or to support license amendments) are required to be performed by the licensee because of this rule. However, analyses existing in the FSAR which are known

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to be inaccurate or in error as a result of new analyses performed by the licensee pursuant to NRC requirements, would have to be revised. Specialized studies provided in the FSAR, such as on volcanic hazards or quality assurance, should include the latest information that has been developed in response to NRC requirements. New analyses (i.e., analyses not previously included in FSAR) which were required during consideration of unreviewed safety questions,<sup>2</sup> technical specification changes, or other licensing questions, may be incorporated as appendices or otherwise appropriately inserted within the FSAR.

Program type material that is referenced by the FSAR, such as the Quality Assurance Program or the Emergency Plan, should be referenced accurately. If such material has been revised or amended, the latest revision should be referenced. A description of physical changes to the facility should be included in the update after the changes have been approved for use and are operable. The level of detail to be maintained in the updated FSAR should be at least the same as originally provided. Minor differences between actual and projected population figures or other such changes in the site environment need not be reported unless the conclusions of safety analyses relative to public health and safety are affected and the licensee has prepared new analyses as a result of NRC requirements.

Commenters have questioned the relation of the proposed FSAR updating requirements to other reporting requirements such as the Annual Operating Report and § 50.59(b) reporting. It is not the Commission's intention to require submittal of duplicative reports. The Commission is eliminating the requirement for the Annual Operating Report. This will reduce significantly the reporting burden of licensees. There has been no requirement that § 50.59(b) reporting be part of the licensee's Annual Operating Report. This information generally has been included in the Annual Operating Report as a convenience, but it could have been submitted separately and the licensee still would have complied with § 50.59(b) which merely requires reporting "annually or at such shorter

intervals as may be specified in the license." Furthermore, the report required under § 50.59(b) is only "a brief description of such changes, tests, and experiments, including a summary of the safety evaluation of each." The § 50.59(b) reporting may not be detailed sufficiently to be considered adequate to fulfill the FSAR updating requirement. The degree of detail required for updating the FSAR will be generally greater than a "brief description" and a "summary of the safety evaluation." However, there is nothing that precludes submitting the § 50.59(b) report along with the FSAR update submittal and thus satisfy § 50.59(b) along with § 50.71(e). Parts of the FSAR submittal may be referenced by the § 50.59(b) report.

Several commenters have raised legal questions concerning the proposed rule including questions relative to the purpose of the rule, the implication concerning re-reviews, the status of completed hearings, and prior license approvals. The rule is only a reporting requirement to insure that an updated FSAR will be available. Submittal of updated FSAR pages does not constitute a licensing action but is only intended to provide information. It is not intended for the purpose of re-reviewing plants. Matters which have been considered previously during hearings will not be reconsidered as a result of the FSAR submittals. Thus, for example, approvals of license amendments and technical specification changes are independent of the FSAR updating process and once approved would not be subject to further consideration simply because the FSAR is updated. This, of course, does not preclude the reevaluation of previous positions based on new information or new considerations. The material submitted may be reviewed by the NRC staff but will not be formally approved. The new pages will be accepted as representing the licensee's position at the time of submittal and will be utilized in any subsequent reviews or NRC staff activities concerning that facility.

After consideration of the comments that were received and other factors, the Commission has adopted the amendment to Part 50 as set forth below.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of title 5 of the United States Code, the following amendment to 10 CFR Part 50 is published as a document subject to codification.

45 FR 50705

Published 7/31/80

Effective 7/31/80

*Safeguards on Nuclear Material-  
Implementation of US/IAEA Agreement*

See Part 75 Statements of Consideration.

➤ 45 FR 55402

Published 8/19/80

Effective 11/3/80

### 10 CFR Parts 50 and 70

#### Emergency Planning

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is upgrading its emergency planning regulations in order to assure that adequate protective measures can and will be taken in the event of a radiological emergency. Nuclear power plants and certain other licensed facilities are required to submit their emergency plans, together with the emergency response plans of State and local governments, to the Commission. The Commission and the Federal Energy Management Agency will review the plans for adequacy. The amendment also extends emergency planning considerations to "Emergency Planning Zones", and makes additional clarifications.

**EFFECTIVE DATE:** November 3, 1980.

**Note.**—The Nuclear Regulatory Commission has submitted this rule to the Comptroller General for review of the reporting requirements in the rule, pursuant to the Federal Reports Act, as amended (44 U.S.C. 3512). The date on which the reporting requirements of the rule become effective includes a 45-day period, which the statute allows for Comptroller General review (44 U.S.C. 3512(c)(2)).

**FOR FURTHER INFORMATION CONTACT:** Mr. Michael T. Jamgochian, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (telephone: 301-443-5966).

**SUPPLEMENTARY INFORMATION:** On September 19, 1979 and on December 19, 1979, the Commission published for public comment (44 FR 54308 and 44 FR 75167) proposed amendments to its emergency planning regulations for

<sup>2</sup>As defined in § 50.59(a)(2). "A proposed change, test, or experiment shall be deemed to involve an unreviewed safety question (i) if the probability of occurrence or the consequence of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report may be increased; or (ii) if a possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report may be created; or (iii) if the margin of safety as defined in the basis for any technical specification is reduced."

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production and utilization facilities. Extensive comments were received, all of which were evaluated and considered in developing the final rule. The comments received and the staff's evaluation is contained in NUREG-0684. In addition, the NRC conducted four Regional Workshops to solicit comments; these comments are available in NUREG/CP-0011 (April 1980).<sup>1</sup>

The final regulation contains the following elements:

1. In order to continue operations or to receive an operating license an applicant/licensee will be required to submit its emergency plans, as well as State and local governmental emergency response plans, to NRC. The NRC will then make a finding as to whether the state of onsite and offsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. The NRC will base its finding on a review of the Federal Emergency Management Agency (FEMA) findings and determinations as to whether State and local emergency plans are adequate and capable of being implemented and on the NRC assessment as to whether the licensee's/applicant's emergency plans are adequate and capable of being implemented. These issues may be raised in NRC operating license hearings, but a FEMA finding will constitute a rebuttable presumption on the question of adequacy.

2. Emergency planning considerations will be extended to "Emergency Planning Zones."

3. Detailed emergency plan implementing procedures of licensees/applicants will be required to be submitted to NRC for review, and

4. Requirements in 10 CFR Part 50, Appendix E are clarified and upgraded.

### Background

In June 1979, the Nuclear Regulatory Commission began a formal reconsideration of the role of emergency planning in ensuring the continued protection of the public health and safety in areas around nuclear power facilities. The Commission began this reconsideration in recognition of the need for more effective emergency planning and in response to the TMI accident and to reports issued by responsible offices of government and the NRC's Congressional oversight committees.

On December 19, 1979, the Nuclear

Regulatory Commission published in the **Federal Register** (44 FR 75167) proposed amendments to 10 CFR Part 50 and Appendix E to Part 50 of its regulations. Publication of these final rule changes in the **Federal Register** is not only related to the December 19, 1979 proposed rule changes but also incorporates the proposed changes to 10 CFR Parts 50 and 70 (44 FR 54308) published on September 19, 1979. Interested persons were invited to submit written comments/suggestions in connection with the proposed amendments within 60 days after publication in the **Federal Register**. During this comment period (in January 1980) the Commission conducted four regional workshops with State and local officials, utility representatives, and the public to discuss the feasibility of the various portions of the proposed amendments, their impact, and the procedures proposed for complying with their provisions. The NRC used the information from these workshops along with the public comment letters to develop the final rule (more than 200 comment letters and the points made in two petitions for rulemaking were also considered).

In addition to the above, on June 25, 1980, the Commission was briefed by three panels of public commenters on the rule, one each comprised of representatives from the industry, State and local governments, and public interest groups. Each panel raised important concerns regarding the final rule. On July 3, 1980, the Commission was briefed by its staff in response to these panels, including several modifications to the proposed final rules. Finally, on July 23, 1980, at the final Commission consideration of these rules, the Commission was briefed by the General Counsel on the substance of conversations with Congressional staff members who were involved with passage of the NRC Authorization Act for fiscal year 1980, Pub. L. No. 96-295. The General Counsel advised the Commission that the NRC final rules were consistent with that Act. The Commission has relied on all of the above information in its consideration of these final rules. In addition, the Commission directs that the transcripts of these meetings shall be part of the administrative record in this rulemaking. However, the transcripts have not been reviewed for accuracy and, therefore, are only an informal record of the matters discussed.

After evaluating all public comment letters received and all the information obtained during the workshops as well as additional reports such as the Presidential Commission and the NRC Special Inquiry Group Reports, the Commission has decided to publish the final rule changes described below.

### Description of Final Rule Changes

The Commission has decided to adopt a version of the proposed rules similar to alternative A described in Sections 50.47 and 50.54 in the **Federal Register** Notice dated December 19, 1979 (44 FR 75167), as modified in light of comments. These rules are consistent with the

approach outlined by FEMA and NRC in a Memorandum of Understanding (45 FR 5847, January 24, 1980). No new operating license will be granted unless the NRC can make a favorable finding that the integration of onsite and offsite emergency planning provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. In the case of an operating reactor, if it is determined that there are such deficiencies that a favorable NRC finding is not warranted and if the deficiencies are not corrected within 4 months of that determination, the Commission will determine expeditiously whether the reactor should be shut down or whether some other enforcement action is appropriate, pursuant to procedures provided for in 10 CFR 2.200-2.206. In any case where the Commission believes that the public health, safety, or interest so requires, the plant will be required to shut down immediately (10 CFR 2.202(f), see 5 U.S.C. 558(c)).

The standards that the NRC will use in making its determinations under these rules are set forth in the final regulation. Wherever possible, these standards may blend with other emergency planning procedures for nonnuclear emergencies presently in existence. The standards are a restatement of basic NRC and now joint NRC-FEMA guidance to licensees and to State and local governments. See NUREG-0654; FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants for Interim Use and Comment," (January 1980). In deciding whether to permit reactor operation in the face of some deficiencies, the Commission will examine among other factors whether the deficiencies are significant for the reactor in question, whether adequate interim compensatory actions have been or will be taken promptly, or whether other compelling reasons exist for reactor operation. In determining the sufficiency of "adequate interim compensatory actions" under this rule, the Commission will examine State plans, local plans, and licensee plans to determine whether features of one plan can compensate for deficiencies in another plan so that the level of protection for the public health and safety is adequate. This interpretation is consistent with the provisions of the NRC Authorization Act

<sup>1</sup> Copies of NUREG documents are available at the Commission's Public Document Room, 1717 H Street, NW, Washington, D.C. 20555. Copies may be purchased from the Government Printing Office. Information on current prices may be obtained by writing the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Publications Sales Manager.



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for fiscal year 1980, Pub. L. 96-295.

The regulation contains the following three major changes from past practices:

1. In order to continue operations or to receive an operating license, an applicant/licensee will be required to submit its emergency plans, as well as State and local governmental emergency response plans, to NRC. The NRC will then make a finding as to whether the state of onsite and offsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

The NRC will base its finding on a review of the FEMA findings and determinations as to whether State and local emergency plans are adequate and capable of being implemented and on the NRC assessment as to whether the applicant's/licensee's emergency plans are adequate and capable of being implemented. In any NRC licensing proceeding, a FEMA finding will constitute a rebuttable presumption on the question of adequacy. Specifically:

- a. An operating license will not be issued unless a favorable NRC overall finding can be made.

- b. After April 1, 1981, an operating plant may be required to shut down if it is determined that there are deficiencies such that a favorable NRC finding cannot be made or is no longer warranted and the deficiencies are not corrected within 4 months of that determination.

2. Emergency planning considerations must be extended to "Emergency Planning Zones," and

3. Detailed emergency planning implementing procedures of both licensees and applicants for operating licenses must be submitted to NRC for review.

In addition, the Commission is revising 10 CFR Part 50, Appendix E, "Emergency Plans for Production and Utilization Facilities," in order to clarify, expand, and upgrade the Commission's emergency planning regulations. Sections of Appendix E that are expanded include:

1. Specification of "Emergency Action Levels" (Sections IV.B and C)

2. Dissemination to the public of basic emergency planning information (Section IV.D)

3. Provisions for the State and local governmental authorities to have a capability for rapid notification of the public during a serious reactor emergency, with a design objective of completing the initial notification within 15 minutes after notification by the licensee (Section IV.D)

4. A licensee onsite technical support center and a licensee near site

emergency operations facility (Section IV.E)

5. Provisions for redundant communications systems (Section IV.E)

6. Requirement for specialized training (Section IV.F)

7. Provisions for up-to-date plan maintenance (Section IV.G)

Applicants for a construction permit would be required to submit more information as required in the new Section II of Appendix E.

### Rationale for the Final Rules

The Commission's final rules are based on the significance of adequate emergency planning and preparedness to ensure adequate protection of the public health and safety. It is clear, based on the various official reports described in the proposed rules (44 FR 75169) and the public record compiled in this rulemaking, that onsite and offsite emergency preparedness as well as proper siting and engineered design features are needed to protect the health and safety of the public. As the Commission reacted to the accident at Three Mile Island, it became clear that the protection provided by siting and engineered design features must be bolstered by the ability to take protective measures during the course of an accident. The accident also showed clearly that onsite conditions and actions, even if they do not cause significant offsite radiological consequences, will affect the way the various State and local entities react to protect the public from any dangers associated with the accident. In order to discharge effectively its statutory responsibilities, the Commission must know that proper means and procedures will be in place to assess the course of an accident and its potential severity, that NRC and other appropriate authorities and the public will be notified promptly, and that adequate protective actions in response to actual or anticipated conditions can and will be taken.

The Commission's organic statutes provide it with a unique degree of discretion in the execution of agency functions. *Siegel v. AEC*, 400 F.2d 778, 783 (D.C. Cir. 1968), see *Westinghouse Electric Corp. v. NRC*, 598 F.2d 759, 771 & n.47 (3d Cir. 1979). "Both the Atomic Energy Act of 1954 and the Energy Reorganization Act of 1974 confer broad regulatory functions on the Commission and specifically authorize it to promulgate rules and regulations it deems necessary to fulfill its responsibilities under the Acts, 42 U.S.C. § 2201(p)." *Public Service Co. of New Hampshire v. NRC*, 582 F.2d 77, 82 (1st Cir.), cert. denied, 439 U.S. 1048 (1978). See 42 U.S.C. 2133(a). As the Supreme

Court stated almost 20 years ago, the Atomic Energy Act "clearly contemplates that the Commission shall by regulation set forth what the public safety requirements are as a prerequisite to the issuance of any license or permit under the Act," *Power Reactor Development Co. v. International Union of Electrical Radio Machine Workers*, 387 U.S. 396, 404 (1961). Finally, it is also clear that "Congress, when it enacted [42 U.S.C. 2236] . . . , must have envisioned that licensing standards, especially in the areas of health and safety regulation, would vary over time as more was learned about the hazards of generating nuclear energy. Insofar as those standards became more demanding, Congress surely would have wanted the new standards, if the Commission deemed it appropriate, to apply to those nuclear facilities already licensed," *Ft. Pierce Utilities Authority v. United States*, 606 F.2d 986, 996 (D.C. Cir. 1979).

In response to and guided by the various reports and public comments, as well as its own determination on the significance of emergency preparedness, the Commission has therefore concluded that adequate emergency preparedness is an essential aspect in the protection of the public health and safety. The Commission recognizes there is a possibility that the operation of some reactors may be affected by this rule through inaction of State and local governments or an inability to comply with these rules. The Commission believes that the potential restriction of plant operation by State and local officials is not significantly different in kind or effect from the means already available under existing law to prohibit reactor operation, such as zoning and land-use laws, certification of public convenience and necessity, State financial and rate considerations (10 CFR 50.33(f)), and Federal environmental laws. The Commission notes, however, that such considerations generally relate to a one-time decision on siting, whereas this rule requires a periodic renewal of State and local commitments to emergency preparedness. Relative to applying this rule in actual practice, however, the Commission need not shut down a facility until all factors have been thoroughly examined. The Commission believes, based on the record created by the public workshops, that State and local officials as partners in this undertaking will endeavor to provide fully for public protection.

### Summary of Comments on Major Issues

The Commission appreciates the extensive public comments on this important rule. In addition to the record



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of the workshops, the NRC has received over 200 comment letters on the proposed rule changes. The following major issues have been raised in the comments received.

### *Issue A: NRC Review and Concurrence in State and Local Radiological Plans*

1. FEMA is best suited to assess the adequacy of State and local radiological emergency planning and preparedness and report any adverse findings to NRC for assessment of the licensing consequences of those findings.

2. The proposed rule fails to provide objective standards for NRC concurrence, reconcurrence, and withdrawal of concurrence.

3. In the absence of additional statutory authority, the proposed rule frustrates Congressional intent to preempt State and local government veto power over nuclear power plant operation.

4. Procedures and standards for adjudication of emergency planning disputes are not adequately specified in the proposed rule.

### *Issue B: Emergency Planning Zones (EPZs)*

1. Regulatory basis for imposition of the Emergency Planning Zone concept should be expressly stated in the regulation.

2. Provisions regarding the plume exposure pathway EPZ should provide a maximum planning distance of 10 miles.

3. References to NUREG-0396 should be deleted to avoid disputes over its meaning in licensing proceedings.

### *Issue C: Alternative A and B (in 50.47 and 50.54)*

1. Neither alternative is necessary because the Commission has sufficient authority to order a plant shut down for safety reasons and should be prepared to exercise that authority only on a case-by-case basis and when a particular situation warrants such action.

2. No case has been made by the Commission for the need for automatic shutdown, as would be required in alternative B, and certainly no other NRC regulations exist that would require such action based on a concept as amorphous as "concurrence in State and local emergency plans."

3. The idea that the Commission might grant an exemption to the rules that would permit continued operation (under alternative B) has little significance, primarily because 10 CFR Part 50.12(a) already permits the granting of exemptions.

4. The process and procedures for obtaining such exemptions are not defined, nor is there any policy indication that would indicate the

Commission's disposition to grant such exemptions.

5. The Commission, in developing this aspect of the proposed rule, must consider its own history. There was time when regulation was characterized by the leaders of the agency by simple and very appropriate expressions. The process was to be "effective and efficient." The application of regulatory authority was to be "firm, but fair." Regardless of the outcome of the "concurrence" issue, the Commission must appreciate that alternative B is not fair. It is not effective regulation.

### *Issue D: Public Education*

Only information required to inform the public about what to do in the event of a radiological emergency need be disseminated. There should be flexibility, in any particular case, as to who will be ultimately responsible for disseminating such information.

### *Issue E: Legal Authority*

1. A few commenters felt that NRC had no authority to promulgate a rule as the one proposed.

2. Other comments were the nature that NRC has statutory authority only inside the limits of the plant site.

3. Some commenters suggested that NRC and FEMA should seek additional legislation to compel State and local governments to have emergency plans, if that is what is necessary.

### *Issue F: Schedule for Implementation*

The schedule for implementing the proposed rule was considered to be unrealistic and in some cases in conflict with various State schedules already in existence. A sampling of the comments on the implementation schedule follows:

1. The 180 days in the schedule is an insufficient amount of time to accomplish tasks of this magnitude; the Federal government does not work with such speed. States are bureaucracies also; there is no reason to assume they can work faster. It took years of working with States to get the plans that are presently concurred in. It is just insufficient time for new concurrences and review. Also, to get a job done within that time frame means a hurried job, rather than an acceptable and meaningful plan.

2. The time provided is inadequate for States to acquire the hardware needed. States must go out for competitive bids just as the Federal government does. Between processing and accepting a bid and actual delivery of equipment, it may take a year to get the hardware. The State budgets years ahead; therefore, if a State or local government needs more money, it may have to go to the

legislature. This is a time-consuming public process that may not fit the Federal schedule.

3. NRC and FEMA could not review 70 or more plans and provide concurrence by January 1, 1981. The Federal government moves slowly. Commenters did not think that NRC and FEMA can review all the plans within the time frame scheduled. If the Federal government cannot meet its schedule, why or how should the States?

4. Funding could not be appropriated by State and local governments before the deadline. It was suggested that the Commission use H. Rept. #96-413, "Emergency Planning U.S. Nuclear Power Plants: Nuclear Regulatory Commission Oversight," for the time frame rather than that in the proposed rule or use a sliding-scale time frame since States are at various stages of completing their emergency plans.

### *Issue G: Impact of Proposed Rule*

1. The proposed regulations were considered by some commenters as unfair to utilities because it was felt they place the utilities in the political and financial role that FEMA should be assuming. NRC is seen as in effect giving State and local governments veto over the operation of nuclear plants. It was questioned whether this was an intent of the rule. In addition, it was felt that utilities, their customers, and their shareholders should not be penalized by a shutdown (with a resulting financial burden) because of alleged deficiencies or lack of cooperation by State and local officials.

2. It was suggested that NRC's Office of Inspection and Enforcement conduct the reviews of the State and local governmental emergency response plans in order to ensure prompt, effective, and consistent implementation of the proposed regulations.

3. One commenter noted that the public should be made aware of the issue of intermediate and long-term impacts of plant shutdowns. Specifically, people should be informed of the possibility of "brownouts," cost increases to the consumer due to securing alternative energy sources, and the health and safety factors associated with those alternative sources.

### *Issue H: Public Notification*

1. Ultimate responsibility for public notification of a radiological emergency must be placed on State and local government.

2. The "fifteen minute" public notification rule is without scientific justification, fails to differentiate between areas close in and further away from the site, and ignores the technical

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difficulties associated with such a requirement.

### *Issue I: Emergency Action Levels*

Applicants, in cooperation with State and local governmental authorities, should be permitted the necessary flexibility to develop emergency action level criteria appropriate for the facility in question, subject to NRC approval. Inflexible NRC emergency action level standards are not necessary.

### *Issue J: Training*

1. Mandatory provision for training local service personnel and local news media persons is outside of NRC's jurisdiction and is not necessary to protect the public health and safety.
2. Public participation in drills or critiques thereof should not be required.
3. The provision regarding formal critiques should be clarified to mean the licensee is responsible for developing and conducting such critiques.
4. Definitive performance criteria for evaluation of drills should be developed by the licensee, subject to NRC approval.

### *Issue K: Implementing Procedures*

NRC review of implementing procedures is only necessary to apprise the NRC staff of the details of the plans for use by the NRC during the course of an actual emergency.

### *Issue L: Funding*

1. Nuclear facilities, although located in one governmental tax jurisdiction and taxed by that jurisdiction, affect other jurisdictions that must bear immediate and long-term planning costs without having access to taxes from the facility.
2. As the radius of planning requirements becomes greater, few facilities are the concern of a single county. The planning radius often encompasses county lines, State lines, and in some instances, international boundaries.
3. As new regulations are generated to oversee the nuclear industry and old ones expanded, there is an immediate need to address fixed nuclear facility planning at all levels of government, beginning at the lowest and going to the highest. All levels of government need access to immediate additional funds to upgrade their response capability.
4. It is well understood that the consumer ultimately must pay the price for planning, regardless of the level in government at which costs are incurred. It becomes a matter of how the consumer will be taxed, who will administer the tax receipts, and what is the most effective manner in which to address the problem.

5. The basis for effective offsite response capabilities is a sound emergency preparedness program. Federal support (funding and technical assistance) for the development of State and local offsite capabilities should be incorporated into FEMA's preparedness program for all emergencies.

### *Issue M: General*

The States support Federal oversight and guidance in the development of offsite response capabilities. However, many States feel the confusion and uncertainty in planning requirements following Three Mile Island is not a proper environment in which to develop effective capabilities nor does it serve the best interests of their citizens. The development of effective nuclear facility incident response capabilities will require close coordination and cooperation among responsible Federal agencies, State government, and the nuclear industry. An orderly and comprehensive approach to this effort makes it necessary that onsite responsibilities be clearly associated with NRC and the nuclear industry while deferring offsite responsibilities to State government with appropriate FEMA oversight and assistance.

In addition to these comments, two petitions for rulemaking were filed in reference to the proposed rule. These were treated as public comments rather than petitions and were considered in developing the final rule.

The Commission has placed the planning objectives from NUREG-0654; FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants for Interim Use and Comment," January 1980, into the final regulations. Comments received concerning NUREG-0654 were available in developing the final regulation. The Commission notes that the planning objectives in NUREG-0654 were largely drawn from NUREG-75/111, "Guide and Checklist for Development and Evaluation of State and Local Government Radiological Emergency Response Plans in Support of Fixed Nuclear Facilities," (December 1, 1974) and Supplement 1 thereto dated March 15, 1977, which have been in use for some time.

The approximately 60 public comment letters received on NUREG-0654 were not critical of the proposed planning objectives. The Commission also notes that at the May 1, 1980 ACRS meeting, the Atomic Industrial Forum representative encouraged the use of the planning objectives from NUREG-0654 in the final regulations in order to

reduce ambiguity and provide specificity to the final regulation.

Based on the above, the Commission has decided to modify the proposed rule changes in the areas discussed in paragraphs I through X below.

### *I. FEMA/NRC Relationship*

In issuing this rule, NRC recognizes the significant responsibilities assigned to FEMA, by Executive Order 12148 on July 15, 1979, to coordinate the emergency planning functions of executive agencies. In view of FEMA's new role, NRC agreed on September 11, 1979, that FEMA should henceforth chair the Federal Interagency Central Coordinating Committee for Radiological Emergency Response Planning and Preparedness (FICCC). On December 7, 1979, the President issued a directive assigning FEMA lead responsibility for offsite emergency preparedness around nuclear facilities. The NRC and FEMA immediately initiated negotiations for a Memorandum of Understanding (MOU) that lays out the agencies' roles and provides for a smooth transfer of responsibilities. It is recognized that the MOU, which became effective January 14, 1980, supersedes some aspects of previous agreements. Specifically, the MOU identifies FEMA responsibilities with respect to emergency preparedness as they relate to NRC as the following:

1. To make findings and determinations as to whether State and local emergency plans are adequate.
2. To verify that State and local emergency plans are capable of being implemented (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualification, and equipment).
3. To assume responsibility for emergency preparedness training of State and local officials.
4. To develop and issue an updated series of interagency assignments that delineate respective agency capabilities and responsibilities and define procedures for coordination and direction for emergency planning and response.

Specifically, the NRC responsibilities for emergency preparedness identified in the MOU are:

1. To assess licensee emergency plans for adequacy.
2. To verify that licensee emergency plans are adequately implemented (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications, and equipment).
3. To review the FEMA findings and determinations on the adequacy and

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capability of implementation of State and local plans.

4. To make decisions with regard to the overall state of emergency preparedness (i.e., integration of the licensee's emergency preparedness as determined by the NRC and of the State/local governments as determined by FEMA and reviewed by NRC) and issuance of operating licenses or shutdown of operating reactors.

In addition, FEMA has prepared a proposed rule regarding "Review and Approval of State Radiological Emergency Plans and Preparedness" (44 FR 42342, dated June 24, 1980). According to the proposed FEMA rule, FEMA will approve State and local emergency plans and preparedness, where appropriate, based upon its findings and determinations with respect to the adequacy of State and local plans and the capabilities of State and local governments to effectively implement these plans and preparedness measures. These findings and determinations will be provided to the NRC for use in its licensing process.

### II. Emergency Planning Zone Concept

The Commission notes that the regulatory basis for adoption of the Emergency Planning Zone (EPZ) concept is the Commission's decision to have a conservative emergency planning policy in addition to the conservatism inherent in the defense-in-depth philosophy. This policy was endorsed by the Commission in a policy statement published on October 23, 1979 (44 FR 81123). At that time the Commission stated that two Emergency Planning Zones (EPZs) should be established around each light-water nuclear power plant. The EPZ for airborne exposure has a radius of about 10 miles; the EPZ for contaminated food and water has a radius of about 50 miles. Predetermined protective action plans are needed for the EPZs. The exact size and shape of each EPZ will be decided by emergency planning officials after they consider the specific conditions at each site. These distances are considered large enough to provide a response base that would support activity outside the planning zone should this ever be needed.

### III. Position on Planning Basis for Small Light-Water Reactors and Ft. St. Vrain

The Commission has concluded that the operators of small light-water-cooled power reactors (less than 250 MWt) and the Ft. St. Vrain gas-cooled reactor may establish smaller planning zones which will be evaluated on a case-by-case basis. This conclusion is based on the lower potential hazard from these facilities (lower radionuclide inventory

and longer times to release significant amounts of activity in many scenarios). Guidance regarding the radionuclides to be considered in planning is set forth in NUREC-0396; EPA 520/1-78-016, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light-Water Nuclear Power Plants," December 1978.

### IV. Rationale for Alternatives Chosen

In a few areas of the proposed rule, the Commission identified two alternatives that it was considering. Many public comments were received on these alternatives; based on due consideration of all comments received as well as the discussions presented during the workshops, the Commission has determined which of each pair of alternatives to retain in the final rule.

In Sections 50.47 and 50.54 (s) and (t), the alternatives dealt with conditioning the issuance of an operating license or continued operation of a nuclear power plant on the existence of State and local government emergency response plans concurred in by NRC.<sup>\*</sup> The basic difference between alternatives A and B in these sections was that, under alternative A, the proposed rule would require a determination by NRC on issuing a license or permitting continued operation of plants in those cases where relevant State and local emergency response plans had not received NRC concurrence. Denial of a license or shutdown of a reactor would not follow automatically in every case. Under alternative B, shutdown of the reactor would be required automatically if the appropriate State and local emergency response plans had not received NRC concurrence within the prescribed time periods unless an exemption is granted.

After consideration of the public record and on the recommendation of its staff, the Commission has chosen a text for Sections 50.47 and 50.54 (s) and (t) that is similar to, but less restrictive than, alternative A in the proposed rule. Rather than providing for the shutdown of the reactor as the only enforcement action and prescribing specific preconditions for the shutdown remedy, the final rule makes clear that for emergency planning rules, like all other rules, reactor shutdown as outlined in the rule is but one of a number of possible enforcement actions and many factors should be considered in determining whether it is an appropriate action in a given case. This Commission choice is consistent with most of the comments received from State and local

governments and is consistent with the provisions of Section 109 of the NRC fiscal year 1980 Authorization Act. Alternative B was seen by some of the commenters as potentially causing unnecessarily harsh economic and social consequences to State and local governments, utilities, and the public.

State and local governments that are directly involved in implementing planning objectives of the rule strongly favor alternative A since it provides for a cooperative effort with State and local governments to reflect their concerns and desires in these rules. This choice is responsive to that effort. In addition, the industry strongly supported alternative A as being the more workable of the two alternatives.

In Appendix E, Sections II.C and III, alternative A would require an applicant/licensee to outline "... corrective measures to prevent damage to onsite and offsite property," as well as protective measures for the public. Alternative B addresses only protective measures for the public health and safety. The Commission has chosen alternative B because public health and safety should take clear precedence over actions to protect property. Measures to protect property can be taken on an ad hoc basis as resources become available after an accident.

In Appendix E, under Training, alternative A would provide for a joint licensee, Federal, State, and local government exercise every 3 years, whereas alternative B would provide for these exercises to be performed every 5 years at each site. The Commission has chosen alternative B because the Commission is satisfied that the provision that these exercises be performed every 5 years for each site will allow for an adequate level of preparedness among Federal emergency response agencies. In addition, under these regulations, each licensee is required to exercise annually with local governmental authorities. Furthermore, Federal emergency response agencies may have difficulty supporting exercises every 3 years for all of the nuclear facilities that would be required to comply with these rule changes.

### V. Definition of Plan Approval Process

The term "concurrence" has been deleted from the proposed regulations and replaced with reference to the actual procedure and standards that NRC and FEMA have agreed upon and are implementing. According to the agreed upon procedure, FEMA will make a finding and determination as to the adequacy of State and local government emergency response plans. The NRC will determine the adequacy of

<sup>\*</sup> See Section V for a discussion concerning "concurrence."



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the licensee emergency response plans. After these two determinations have been made, NRC will make a finding in the licensing process as to the overall and integrated state of preparedness.

It was pointed out to the Commission at the workshops and in public comment letters that the term "concurrency" was confusing and ambiguous. Also, there was a great deal of misunderstanding with the use of the term because, in the past, the obtaining of NRC "concurrency" in State emergency response plans was voluntary on behalf of the States and not a regulatory requirement in the licensing process. Previously too, "concurrency" was statewide rather than site-specific.

### VI. Fifteen-Minute Notification

The requirement for the capability for notification of the public within 15 minutes after the State/local authorities have been notified by the licensee has been expanded and clarified. It also has been removed as a footnote and placed in the body of Appendix E. The implementation schedule for this requirement has been extended to July 1, 1981. This extension of time has been adopted because most State and local governments identified to the Commission the difficulty in procuring hardware, contracting for installation, and developing procedures for operating the systems used to implement this requirement.

The Commission is aware that various commenters, largely from the industry, have objected to the nature of the 15-minute notification requirement, indicating that it may be both arbitrary and unworkable.

Among the possible alternatives to this requirement are a longer notification time, a notification time that varies with distance from the facility, or no specified time. In determining what that criterion should be, a line must be drawn somewhere, and the Commission believes that providing as much time as practicable for the taking of protective action is in the interest of public health and safety. The Commission recognizes that this requirement may present a significant financial impact and that the technical basis for this requirement is not without dispute. Moreover, there may never be an accident requiring using the 15-minute notification capability. However, the essential rationale behind emergency planning is to provide additional assurance for the public protection even during such an unexpected event. The 15-minute notification capability requirement is wholly consistent with that rationale.

The Commission recognizes that no single accident scenario should form the

basis for choice of notification capability requirements for offsite authorities and for the public. Emergency plans must be developed that will have the flexibility to ensure response to a wide spectrum of accidents. This wide spectrum of potential accidents also reflects on the appropriate use of the offsite notification capability. The use of this notification capability will range from immediate notification of the public (within 15 minutes) to listen to predesignated radio and television stations, to the more likely events where there is substantial time available for the State and local governmental officials to make a judgment whether or not to activate the public notification system.

Any accident involving severe fuel degradation or core melt that results in significant inventories of fission products in the containment would warrant immediate public notification and consideration, based on the particular circumstances, of appropriate protective action because of the potential for leakage of the containment building. In addition, the warning time available for the public to take action may be substantially less than the total time between the original initiating event and the time at which significant radioactive releases take place. Specification of particular times as design objectives for notification of offsite authorities and the public are a means of ensuring that a system will be in place with the capability to notify the public to seek further information by listening to predesignated radio or television stations. The Commission recognizes that not every individual would necessarily be reached by the actual operation of such a system under all conditions of system use. However, the Commission believes that provision of a general alerting system will significantly improve the capability for taking protective actions in the event of an emergency. The reduction of notification times from the several hours required for street-by-street notification to minutes will significantly increase the options available as protective actions under severe accident conditions. These actions could include staying indoors in the case of a release that has already occurred or a precautionary evacuation in the case of a potential release thought to be a few hours away. Accidents that do not result in core melt may also cause relatively quick releases for which protective actions, at least for the public in the immediate plant vicinity, are desirable.

Some comments received on the proposed rule advocated the use of a staged notification system with quick notification required only near the plant. The Commission believes that the capability for quick notification within the entire plume exposure emergency planning zone should be provided but recognizes that some planners may wish to have the option of selectively actuating part of the system during an actual response. Planners should carefully consider the impact of the added decisions that offsite authorities would need to make and the desirability of establishing an official communication link to all residents in the plume exposure emergency planning zone when determining whether to plan for a staged notification capability.

### VII. Effective Date of Rules and Other Guidance

Prior to the publication of these amendments, two guidance documents were published for public comment and interim use. These are NUREG-0610, "Draft Emergency Action Level Guidelines for Nuclear Power Plants," (September 1979) and NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants for Interim Use and Comment," (January 1980). It is expected that versions of these documents, revised on the basis of public comments received, will be issued to assist in defining acceptable levels of preparedness to meet this final regulation. In the interim, these documents should continue to be used as guidance.

### VIII. Hearing Procedures Used in Implementation of These Regulations

Should the NRC believe that the overall state of emergency preparedness at and around a licensed facility is such that there is some question whether a facility should be permitted to continue to operate, the Commission may issue an order to the licensee to show cause, pursuant to 10 CFR 2.202, why the plant should not be shut down. This issue may arise, for example, if NRC finds a significant deficiency in a licensee plan or in the overall state of emergency preparedness.

If the NRC decides to issue an order to show cause, it will provide the licensee the opportunity to demonstrate to the Commission's satisfaction, for example, that the alleged deficiencies are not significant for the reactor in question, whether adequate interim compensating actions have been or will be taken promptly, or whether other compelling



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reasons exist for reactor operation. Finally, pursuant to 10 CFR 2.202(f), the Commission may, in appropriate circumstances, make the order immediately effective, which could result in immediate plant shutdown subject to a later hearing.

### IX. Funding

In view of the requirements in these rule changes regarding the actions to be taken in the event State and local government planning and preparedness are or become inadequate, a utility may have an incentive, based on its own self interest as well as its responsibility to provide power, to assist in providing manpower, items of equipment, or other resources that the State and local governments may need but are themselves unable to provide. The Commission believes that in view of the President's Statement of December 7, 1979, giving FEMA the lead role in offsite planning and preparedness, the question of whether the NRC should or could require a utility to contribute to the expenses incurred by State and local governments in upgrading and maintaining their emergency planning and preparedness (and if it is to be required, the mechanics for doing so) is beyond the scope of the present rule change. It should be noted, however, that any direct funding of State or local governments solely for emergency preparedness purposes by the Federal government would come through FEMA.

### X. Exercises

On an annual basis, all commercial nuclear power facilities will be required by NRC to exercise their plans; these exercises should involve exercising the appropriate local government plans in support of these facilities. The State may choose to limit its participation in exercises at facilities other than the facility (site) chosen for the annual exercise(s) of the State plan.

Each State and appropriate local government shall annually conduct an exercise jointly with a commercial nuclear power facility. However, States with more than one facility (site) shall schedule exercises such that each individual facility (site) is exercised in conjunction with the State and appropriate local government plans not less than once every 3 years for sites with the plume exposure pathway EPZ partially or wholly within the State, and not less than once every 5 years for sites with the ingestion exposure pathway EPZ partially or wholly within the State. The State shall choose, on a rotational basis, the site(s) at which the required annual exercise(s) is to be conducted; priority shall be given to new facilities

seeking an operating license from NRC that have not had an exercise involving the State plan at that facility site.

The Commission has determined under the criteria in 10 CFR Part 51 that an environmental impact statement for the amendments to 10 CFR Part 50 and Appendix E thereof is not required. This determination is based on "Environmental Assessment for Final Changes to 10 CFR Part 50 and Appendix E of 10 CFR Part 50, Emergency Planning Requirements for Nuclear Power Plants" (NUREG-0685, June 1980). Comments on the "Draft Negative Declaration; Finding of No Significant Impact" (45 FR 3913, January 21, 1980) were considered in the preparation of NUREG-0685.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that the following amendments to Title 10, Chapter I, Code of Federal Regulations, Parts 50 and 70, are published as a document subject to codification.



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**Register.** Based on the public comments and other considerations, the Commission has adopted the proposed amendments, with modifications as set forth below.

The effective physical protection amendments are designed to have overall equivalency to the recommendations of INFCIRC/225 Rev. 1, but there are differences in the detailed requirements. INFCIRC/225 Rev. 1 recommendations are designed to minimize the possibilities of theft or sabotage of SNM of moderate or low strategic significance. The effective amendments have been primarily designed to require early detection of theft of SNM of moderate or low strategic significance. However, in requiring early detection capabilities, these amendments deter the possibilities of theft or diversion. In the judgment of the Commission, the degree of protection afforded by the containment, monitoring and detection procedures required by these amendments provide equivalency to the INFCIRC/225 Rev. 1 recommendations for protection of theft or diversion of SNM.

Significant differences from the proposed rule published for comment on May 24, 1978 are: (1) Plutonium-Beryllium (PuBe) sealed sources would be exempted from the physical protection requirements; (2) Plutonium with isotopic concentration exceeding 80 percent in plutonium-238 would be exempted from the physical protection requirements; (3) package and vehicle search requirements at facilities where special nuclear material of moderate strategic significance is used or stored have been changed; (4) The period of time allotted for submittal of a licensee plan to implement these requirements has been changed from 60 days to 120 days after the effective date of the amendment. In addition, editorial and clarifying changes were made and some definitions added to clarify the intent of the regulations.

The following discussion pertains to items (1) through (4) above.

(1) PuBe sealed sources—Commenters stated that the cost of providing the required physical protection for PuBe sealed sources would be prohibitive from the point of view of the limited budgets available at universities where most of the sources are now located. Imposition of the proposed requirements, it was said, would result in the curtailment of the use of PuBe sources at some sites with a significant impact on the educational and research programs at those institutions. In view of the very small quantities of plutonium found in PuBe sealed sources (generally, from 16 to 161 grams) and the fact that

potential adversaries wishing to obtain a 5 kg formula quantity of plutonium would have to commit separate acts of theft at a large number of widely separated sites without being detected, the Commission has decided that the threat to the common defense and security of this country was sufficiently low that physical security measures should not be required for PuBe sealed sources. There is an upper limit of 500 grams of plutonium to which this exemption can be applied because greater than a 500 gram accumulation of plutonium in this form invalidates the basis for this exemption. IAEA guidelines allow for such exceptions in the case of research type facilities.

(2) More than 80 percent Pu-238—The proposed rule has been amended to reflect that plutonium with isotopic concentration exceeding 80 percent in plutonium-238 would be exempted from the physical protection requirements. This change corrects an oversight in the initially proposed amendments in which it was intended that such material would be exempted to be consistent with the definitions of Category II and III material in the IAEA document INFCIRC/225/Rev. 1.

(3) Search requirements—Package and vehicle search requirements at facilities at which special nuclear material of moderate strategic significance is used or stored have been changed. As revised, random searches are only required regarding items leaving controlled access areas, and not of those entering. The primary objective of entry searches is to detect materials which could be useful in sabotage. Since protection against sabotage is not within the scope of the proposed amendments, an entry search requirement is not necessary.

(4) Submission and Implementation of Plans—Several commenters stated that more time would be needed than the sixty days allowed for submission of physical security plans, or amendments to them, following the date the proposed amendments become effective.

The Commission agrees that more time may be required, especially in the case of licensees who have limited managerial and financial resources, and has changed the submission date to be 120 days following the effective date of the amendment. In addition, the licensee is now required to implement the approved security plan within 240 days following the effective date of the amendment or within 30 days after the plan is approved, whichever is later.

Concurrent with the publication of the amendments, the NRC is publishing a guide entitled "Standard Format and Content for the Licensee Physical Security Plan for the Protection of

Special Nuclear Material of Moderate or Low Strategic Significance." The guide is being published for a sixty-day comment period and will be reissued with comments taken into consideration. The amendments to 10 CFR Parts 70, 73 and 150 would become effective at this time (120 days after publication) (November 21, 1979). Licensees would therefore have 240 days after publication of the amendments to submit their plans. The plan would have to be implemented 30 days after approval by the Commission or 360 days after (date of publication in the *Federal Register*) (July 24, 1979).

Another area of comment dealt with employee screening. Some of the licensees interpreted the screening requirement to call for a full field background investigation of all personnel entering the controlled access areas where the material is used or stored. The wording of the rule has been revised to more clearly indicate that the requirement is merely one requiring a screening based on knowledge of persons permitted access rather than a formal security investigation. The guidance package being issued with the rule explains more fully the intent of this requirement.

There was one other area of comment for which no specific changes were made to the amendments but which is of significance. These comments dealt generally with the technical justification for the proposed amendments.

Many of the commenters questioned the technical justification for the proposed amendments on the basis of the lack of detailed information regarding the threat; the additional costs of implementation they perceived to be incommensurate with only marginal improvements in physical protection; and the impacts on the licensees' ongoing educational and research programs. Particular attention was focused by some commenters on the physical protection requirements for low enriched uranium.

The technical justification for the U.S. adoption of the proposed amendments is contingent on both domestic and international factors, which are closely interrelated. Current NRC physical protection regulations apply primarily to strategic special nuclear material (uranium enriched in the isotope U-235 to 20% or greater, U-233, and plutonium) in quantities of five formula kilograms or greater. There are no specific physical protection requirements for quantities in lesser amounts. Yet, it can be properly argued that a 4.9 formula kilogram quantity of SNM is about as important a quantity as 5.0 kilograms. Multiple thefts of such materials in close to formula quantities could result in the

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accumulation of more than a formula quantity. The proposed detection requirements are considered to provide sufficient protection with minimum added cost so as not to affect educational and research programs. Since the requirements are of a detection nature rather than prevention, characterization of the adversary in the regulations was deemed not to be necessary.

In regard to low enriched uranium (LEU) (enrichments less than 20%), clandestine enrichment to higher levels may go beyond the capability of subnational terrorists, but it does not go beyond the capability of other governments. Unless properly safeguarded, low enriched uranium could be stolen on behalf of foreign governments and enriched to explosive useable levels after it is smuggled out of the U.S.

The Nuclear Non-Proliferation Act of 1978 specifies that NRC shall promulgate regulations which assure that physical security measures are provided to special nuclear materials exported from the United States without specifying whether the materials are low enriched uranium or high enriched uranium. Pursuant to this legislation, the Commission has promulgated 10 CFR Part 110.43 which provides among other things that:

"(b) Commission determinations on the adequacy of physical security programs in recipient countries for Category II and III quantities of material will be based on available relevant information and written assurances from the recipient country or group of countries that physical security measures providing as a minimum protection comparable to that set forth in INFCIRC/225 will be maintained."

While the proposed amendments would provide a needed extension of domestic physical protection to special nuclear materials for which the level of physical protection required was not previously specified, the full value of such protection could not be realized until similar protection is afforded all such material among the nations utilizing such materials. Physical protection measures similar to those proposed, which are based on the recommendations of the IAEA Information Circular INFCIRC/225/Rev. 1, have already been adopted by several countries.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Parts 70, 73, and 150 are published as a document subject to codification.

44 FR 47918  
Published 8/16/79  
Effective 9/17/79

*Licensing of Production and Utilization Facilities; Facilities and Access for Resident Inspection*

See Part 50 Statements of Consideration.

44 FR 68184  
Published 11/28/79  
Effective 3/25/80

*Physical Protection Upgrade Rule*

See Part 73 Statements of Considerations.

45FR14199  
Published 3/5/80  
Effective 3/5/80

*Minor and Clarifying Amendments*

See Part 1 Statements of Consideration

45 FR 18905  
Published 3/24/80  
Effective 3/24/80

*Deletion of reference to Panama Canal Zone; Minor Amendments*

See Part 4 Statements of Consideration.

45 FR 50705  
Published 7/31/80  
Effective 7/31/80

*Safeguards on Nuclear Material-  
Implementation of US/IAEA Agreement*

See Part 75 Statements of Consideration .

➤ 45 FR 55402  
Published 8/19/80  
Effective 11/3/80

*Emergency Planning*

See Part 50 Statements of Consideration







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TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

SUPPLEMENT NUMBER

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## PART 30 • RULES OF GENERAL APPLICABILITY TO DOMESTIC LICENSING...

the regulations in this part and Parts 31-35<sup>†</sup> and applications filed under them, should be addressed to the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C., 20555. Communications, reports and applications may be delivered in person at the Commission's offices at 1717 H Street N.W., Washington, D.C., or \*\*7920 Norfolk Avenue, Bethesda, Md.

### EXEMPTIONS

#### § 30.11 Specific exemptions.

(a) The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part and Parts 31-35<sup>†</sup> of this chapter as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

30.11(b) [Deleted 45 FR 65521]

subject to licensing pursuant to section 202 of the Energy Reorganization Act of 1974 are involved, any prime contractor of the \*\*\* Department is exempt from the requirements for a license set forth in sections 81 and 82 of the Act and from the regulations in this part to the extent that such contractor, under his prime contract with the \*\*\* Department manufactures, produces, transfers, receives, acquires, owns, possesses, or uses<sup>†</sup> byproduct material for: (a) the performance of work for the \*\*\* Department, at a United States Government-owned or controlled site, including the transportation of byproduct material to or from such site and the performance of contract services during temporary interruptions of such transportation; (b) research in, or development, manufacture, storage, testing or transportation of, atomic weapons or components thereof; or (c) the use or operation of nuclear reactors or other nuclear devices in a United States Government-owned vehicle or vessel. In addition to the foregoing exemptions and subject to the requirement for licensing of \*\*\* Department facilities and activities pursuant to section 202 of the Energy Reorganization Act of 1974, any prime contractor or subcontractor of the \*\*\* Department or the Commission is exempt from the requirements for a license set forth in sections 81 and 82 of the Act and from the regulations in this part to the extent that such prime contractor or subcontractor manufactures, produces, transfers, receives, acquires, owns, possesses, or uses<sup>†</sup> byproduct material under his prime contract or subcontract when the Commission determines that the exemption of the prime contractor or subcontractor is authorized by law; and that, under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.

#### § 30.13 Carriers.

Common and contract carriers, freight forwarders, warehousemen, and the U.S. Postal Service are exempt from the regulations in this part and Parts 31-35<sup>†</sup> of this chapter and the requirements for a license set forth in section 81 of the Act to the extent that they transport or store byproduct material in the regular course of carriage for another or storage incident thereto.

#### § 30.14 Exempt concentrations.

(a) Except as provided in paragraphs (c) and (d) of this section, any person is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in this part and Parts 31-35<sup>†</sup> of this chapter to the extent that such person receives, possesses, uses, transfers, owns or acquires products or materials containing byproduct material in concentrations not in excess of those listed in § 30.70.

(b) This section shall not be deemed to authorize the import of byproduct material or products containing byproduct material.

(c) A manufacturer, processor, or producer of a product or material in an Agreement State is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in this part and Parts 31, 32, 33, and 34,<sup>†</sup> to the extent that he transfers byproduct material contained in a product or material in concentrations not in excess of those specified in § 30.70 and introduced into the product or material by a licensee holding a specific license issued by an Agreement State, the Commission, or the Atomic Energy Commission expressly authorizing such introduction. This exemption does not apply to the transfer of byproduct material contained in any food, beverage, cosmetic, drug, or other commodity or product designed for ingestion or inhalation by or application to, a human being.

(d) No person may introduce byproduct material into a product or material knowing or having reason to believe that it will be transferred to persons exempt under this section or equivalent regulations of an Agreement State, except in accordance with a license issued pursuant to § 32.11 of this chapter or the general license provided in § 150.20 of Part 150.

#### § 30.15 Certain items containing byproduct material.

(a) Except for persons who apply byproduct material to, or persons who incorporate byproduct material into, the following products, or persons who initially transfer<sup>†</sup> for sale or distribution the following products containing byproduct material, any person is exempt from the requirements for a license set

#### § 30.12 Persons using byproduct material under certain \*\*\* Department of Energy Nuclear Regulatory Commission contracts.

Except to the extent that \*\*\* Department facilities or activities of the types

<sup>†</sup> Amended 43 FR 6915.

\*\* Amended 34 FR 19546.

\*\*\* Amended 45 FR 14199

# PART 30 • RULES OF GENERAL APPLICABILITY TO DOMESTIC LICENSING...

34 FR 6651  
32 FR 785  
31 FR 5315  
forth in section 81 of the Act and from the regulations in Parts 20 and 30-35\* of this chapter to the extent that such person receives, possesses, uses, transfers,\* owns, or acquires the following products:

(1) Timepieces or hands or dials containing not more than the following specified quantities of byproduct material and not exceeding the following specified levels of radiation:

(i) 25 millicuries of tritium per timepiece,

(ii) 5 millicuries of tritium per hand,

(iii) 15 millicuries of tritium per dial (bezels when used shall be considered as part of the dial),

(iv) 100 microcuries of promethium-147 per watch or 200 microcuries of promethium-147 per any other timepiece,

(v) 20 microcuries of promethium-147 per watch hand or 40 microcuries of promethium-147 per other timepiece hand,

(vi) 60 microcuries of promethium-147 per watch dial or 120 microcuries of promethium-147 per other timepiece dial (bezels when used shall be considered as part of the dial),

(vii) The levels of radiation from hands and dials containing promethium-147 will not exceed, when measured through 50 milligrams per square centimeter of absorber:

(a) For wrist watches, 0.1 millirad per hour at 10 centimeters from any surface,

(b) For pocket watches, 0.1 millirad per hour at 1 centimeter from any surface,

(c) For any other timepiece, 0.2 millirad per hour at 10 centimeters from any surface.

(2) Lock illuminators containing not more than 15 millicuries of tritium or not more than 2 millicuries of promethium-147 installed in automobile locks. The levels of radiation from each lock illuminator containing promethium-147 will not exceed 1 millirad per hour at 1 centimeter from any surface when measured through 50 milligrams per square centimeter of absorber.

(3) Balances of precision containing not more than 1 millicurie of tritium per balance or not more than 0.5 millicurie of tritium per balance part.

(4) Automobile shift quadrants containing not more than 25 millicuries of tritium.

\* Amended 43 FR 6915.

(5) Marine compasses containing not more than 750 millicuries of tritium gas and other marine navigational instruments containing not more than 250 millicuries of tritium gas.

(6) Thermostat dials and pointers containing not more than 25 millicuries of tritium per thermostat.

(7) [Deleted 34 FR 6651.]

(8) Electron tubes: *Provided*, That each tube does not contain more than one of the following specified quantities of byproduct material:

(i) 150 millicuries of tritium per microwave receiver protector tube or 10 millicuries of tritium per any other electron tube;

(ii) 1 microcurie of cobalt-60;

(iii) 5 microcuries of nickel-63;

(iv) 30 microcuries of krypton-85;

(v) 5 microcuries of cesium-137;

(vi) 30 microcuries of promethium-147;

And *provided further*, That the levels of radiation from each electron tube containing byproduct material do not exceed 1 millirad per hour at 1 centimeter from any surface when measured through 7 milligrams per square centimeter of absorber.<sup>3</sup>

(9) Ionizing radiation measuring instruments containing, for purposes of internal calibration or standardization, a source of byproduct material not exceeding the applicable quantity set forth in § 30.71, Schedule B.

(10) Spark gap irradiators containing not more than 1 microcurie of cobalt-60 per spark gap irradiator for use in electrically ignited fuel oil burners having a firing rate of at least 3 gallons per hour (11.4 liters per hour).

(b) Any person who desires to apply byproduct material to, or to incorporate byproduct material into, the products exempted in paragraph (a) of this section, or who desires to initially transfer\* for sale or distribution such products containing byproduct material, should apply for a specific license pursuant to

<sup>3</sup>For purposes of this subparagraph "electron tubes" include spark gap tubes, power tubes, gas tubes including glow lamps, receiving tubes, microwave tubes, indicator tubes, pickup tubes, radiation detection tubes, and any other completely sealed tube that is designed to conduct or control electrical currents.

§ 32.14 of this chapter, which license states that the product may be distributed by the licensee to persons exempt from the regulations pursuant to paragraph (a) of this section.

## § 30.16 Resins containing scandium-46 and designed for sand-consolidation in oil wells.

Any person is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in Parts 20 and 30-35\* of this chapter to the extent that such person receives, possesses, uses, transfers,\* owns, or acquires synthetic plastic resins containing scandium-46 which are designed for sand-consolidation in oil wells, and which have been manufactured or initially transferred\* for sale or distribution, in accordance with a specific license issued pursuant to § 32.17 of this chapter or equivalent regulations of an Agreement State. The exemption in this section does not authorize the manufacture or initial transfer for sale or distribution\* of any resins containing scandium-46.

## § 30.18 Exempt quantities.

(a) Except as provided in paragraphs (c) and (d) of this section, any person is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in Parts 30-34 of this chapter to the extent that such person receives, possesses, uses, transfers, owns, or acquires byproduct material in individual quantities each of which does not exceed the applicable quantity set forth in § 30.71, Schedule B.

(b) Any person who possesses byproduct material received or acquired prior to September 25, 1971, under the general license then provided in § 31.4 of this chapter is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in Parts 30-34 of this chapter to the extent that such person possesses, uses, transfers, or owns such byproduct material.

(c) This section does not authorize for purposes of commercial distribution\* the production, packaging, repackaging, or transfer\* of byproduct material, or the incorporation of byproduct material into products intended for commercial distribution.

(d) No person may, for purposes of commercial distribution,\* transfer byproduct material in the individual quantities set forth in § 30.71 Schedule



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B, knowing or having reason to believe that such quantities of byproduct material will be transferred to persons exempt under this section or equivalent regulations of an Agreement State, except in accordance with a license issued under § 32.18 of this chapter, which license states that the byproduct material may be transferred by the licensee to persons exempt under this section or the equivalent regulations of an Agreement State.

### § 30.19 Self-luminous products containing tritium, krypton-85, or promethium-147.

(a) Except for persons who manufacture, process, produce, or initially transfer for sale or distribution\* self-luminous products containing tritium, krypton-85, or promethium-147,\* and except as provided in paragraph (c) of this section, any person is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in Parts 20 and 30-35\* of this chapter to the extent that such person receives, possesses, uses, transfers,\* owns, or acquires tritium, krypton-85, or promethium-147 in self-luminous products manufactured, processed, produced, or initially\* transferred in accordance with a specific license issued pursuant to § 32.22 of this chapter, which license authorizes the initial\* transfer of the product for use under this section.

(b) Any person who desires to manufacture, process, or produce self-luminous products containing tritium, krypton-85, or promethium-147, or to transfer\* such products for use pursuant to paragraph (a) of this section, should apply for a license pursuant to § 32.22 of this chapter, which license states that the product may be transferred by the licensee to persons exempt from the regulations pursuant to paragraph (a) of this section or equivalent regulations of an Agreement State.

(c) The exemption in paragraph (a) of this section does not apply to tritium, krypton-85, or promethium-147 used in products primarily for frivolous purposes or in toys or adornments.

### § 30.20 Gas and aerosol detectors containing byproduct material.

(a) Except for persons who manufacture, process, produce, or initially transfer for sale or distribution\* gas and

aerosol detectors containing byproduct material,\* any person is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in Parts 20 and 30-35\* of this chapter to the extent that such person receives, possesses, uses, transfers,\* owns, or acquires byproduct material in gas and aerosol detectors designed to protect life or property from fires and airborne hazards, and manufactured, processed, produced, or initially\* transferred in accordance with a specific license issued pursuant to § 32.26 of this chapter, which license authorizes the initial\* transfer of the product for use under this section.

(b) Any person who desires to manufacture, process, or produce gas and aerosol detectors containing byproduct material, or to initially\* transfer such products for use pursuant to paragraph (a) of this section, should apply for a license pursuant to § 32.26 of this chapter, which license states that the product may be initially\* transferred by the licensee to persons exempt from the regulations pursuant to paragraph (a) of this section or equivalent regulations of an Agreement State.

## LICENSES

### § 30.31 Types of licenses.

Licenses for byproduct material are of two types: General and specific. Specific licenses are issued to named persons upon applications filed pursuant to the regulations in this part and Parts 32-35.\* General licenses are effective without the filing of applications with the Commission or the issuance of licensing documents to particular persons.

### § 30.32 Application for specific licenses.

(a) Applications for specific licenses should be filed in duplicate on Form NRC-313, "Application for Byproduct Material License," with the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

Applications may be filed in person at the Commission's offices at 1717 H Street, N.W., Washington, D.C., or 7920 Norfolk Avenue, Bethesda, Maryland. Information contained in previous applications, statements, or reports filed with the Commission or the Atomic Energy Commission may be incorporated by reference, provided that such references are clear and specific.

(b) The Commission may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the Commission to determine whether the application should be granted or denied or whether a license, should be modified or revoked.

(c) Each application shall be signed by the applicant or licensee or a person duly authorized to act for and on his behalf.

(d) An application for license filed pursuant to the regulations in this part and Parts 32-35\* will be considered also as an application for licenses authorizing other activities for which licenses are required by the Act, provided that the application specifies the additional activities for which licenses are requested and complies with regulations of the Commission as to applications for such licenses.

(e) Each application for a byproduct material license, other than a license exempted from Part 170 of this chapter, shall be accompanied by the fee prescribed in § 170.31 of this chapter. No fee will be required to accompany an application for renewal or amendment of a license, except as provided in § 170.31 of this chapter.

(f) An application for a license to receive and possess byproduct material for commercial waste disposal by land burial or for the conduct of any other activity which the Commission determines will significantly affect the quality of the environment shall be filed at least 9 months prior to commencement of construction of the plant or facility in which the activity will be conducted and shall be accompanied by any Environmental Report required pursuant to Part 51\*\* of this chapter.

### § 30.33 General requirements for issuance of specific licenses.

(a) An application for a specific license will be approved if:

- (1) The application is for a purpose authorized by the Act;
- (2) The applicant's proposed equipment and facilities are adequate to protect health and minimize danger to life or property;
- (3) The applicant is qualified by training and experience to use the material for the purpose requested in such

\* Amended 43 FR 6915.

\*\* Amended 39 FR 26279.



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30 FR 8185

manner as to protect health and minimize danger to life or property;

(4) The applicant satisfies any special requirements contained in Parts 32-35;\* and

45 FR 65521

(5) In the case of an application for a license to receive and possess byproduct material for commercial waste disposal by land burial or for the conduct of any other activity which the Commission determines will significantly affect the quality of the environment, the Director of Nuclear Material Safety and Safeguards or his designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made pursuant to Part 51 of this chapter, has concluded, after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to such conclusion shall be grounds for denial of a license to receive and possess byproduct material in such plant or facility. As used in this paragraph the term "commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the environment of a site. The term does not mean site exploration, necessary roads for site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the site or the protection of environmental values.

## PART 30 • RULES OF GENERAL APPLICABILITY TO DOMESTIC LICENSING...

accordance with the provisions of the Act and shall give its consent in writing.

(c) Each person licensed by the Commission pursuant to the regulations in this part and Parts 31-35\* shall confine his possession and use of the byproduct material to the locations and purposes authorized in the license. Except as otherwise provided in the license, a license issued pursuant to the regulations in this part and Parts 31-35\* of this chapter shall carry with it the right to receive, acquire, own, and possess,\* byproduct material. Preparation for shipment and transport of byproduct material shall be in accordance with the provisions of Part 71 of this chapter.

(d) Each license issued pursuant to the regulations in this part and Parts 31-35\* shall be deemed to contain the provisions set forth in section 183b.-d., inclusive, of the Act, whether or not these provisions are expressly set forth in the license.

(e) The Commission may incorporate, in any license issued pursuant to the regulations in this part and Parts 31-35,\* at the time of issuance, or thereafter by appropriate rule, regulation or order, such additional requirements and conditions with respect to the licensee's receipt, possession, use and transfer of byproduct material as it deems appropriate or necessary in order to:

- (1) Promote the common defense and security;
- (2) Protect health or to minimize danger to life or property;
- (3) Protect restricted data;
- (4) Require such reports and the keeping of such records, and to provide for such inspections of activities under the license as may be necessary or appropriate to effectuate the purposes of the Act and regulations thereunder.

(f) Each licensee shall notify the Commission in writing when the licensee decides to permanently discontinue all activities involving materials authorized under the license. This notification requirement applies to all specific licenses issued under this Part and Parts 32 through 35 of this chapter.

(g) Each licensee preparing technetium-99m radiopharmaceuticals from molybdenum-99/technetium-99m generators shall test the generator eluates for molybdenum-99 breakthrough in accordance with § 35.14(b)(4) (i) thru (iv).

§ 30.35 [Deleted 40 FR 8774.]

§ 30.36 Expiration of licenses.

Except as provided in § 30.37(b), each specific license shall expire at the end of the day, in the month and year stated therein.

§ 30.37 Applications for renewal of licenses.

(a) Applications for renewal of a specific license shall be filed in accordance with § 30.32.

(b) In any case in which a licensee, not less than thirty (30) days prior to the expiration of his existing license, has filed an application in proper form for renewal or for a new license, such existing license shall not expire until the application has been finally determined by the Commission.

§ 30.38 Applications for amendment of licenses.

Applications for amendment of a license shall be filed in accordance with § 30.32 and shall specify the respects in which the licensee desires his license to be amended and the grounds for such amendment.

§ 30.39 Commission action on applications to renew or amend.

In considering an application by a licensee to renew or amend his license the Commission will apply the applicable criteria set forth in § 30.33 and Parts 32-35\* of this chapter.

§ 30.41 Transfer of byproduct material.

(a) No licensee shall transfer byproduct material except as authorized pursuant to this section.

(b) Except as otherwise provided in his license and subject to the provisions of paragraphs (c) and (d) of this section, any licensee may transfer byproduct material:

- (1) To the Administration;
- (2) To the agency in any Agreement State which regulates radioactive material pursuant to an agreement under section 274 of the Act;
- (3) To any person exempt from the licensing requirements of the Act and regulations in this part, to the extent permitted under such exemption;
- (4) To any person in an Agreement State, subject to the jurisdiction of that State, who has been exempted from the

(b) Upon a determination that an application meets the requirements of the Act, and the regulations of the Commission, the Commission will issue a specific license authorizing the possession and use of byproduct material (Form NRC-374, "Byproduct Material License").

§ 30.34 Terms and conditions of licenses.

(a) Each license issued pursuant to the regulations in this part and the regulations in Parts 31-35\* shall be subject to all the provisions of the Act, now or hereafter in effect, and to all valid rules, regulations and orders of the Commission.

(b) No license issued or granted pursuant to the regulations in this part and Parts 31-35,\* nor any right under a license shall be transferred, assigned or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person, unless the Commission shall, after securing full information, find that the transfer is in

\* Amended 43 FR 6915.

\*\* Amended 39 FR 26279.



## PART 30 • PROPOSED RULE MAKING

well-logging source involved, including radionuclide, quantity, chemical, and physical form;

(3) Surface location and identification of well;

(4) Results of efforts to immobilize and seal the source in place;

(5) Depth of source;

(6) Depth of the top of the cement plug;

(7) Depth of well;

(8) Any other information (e.g., warning statement) contained on permanent identification plaque;

(9) Notifications made to State agencies; and

(10) A brief description of the attempted recovery efforts.

(d) Any licensee or applicant for a license may apply to the Commission for approval of proposed methods to be used in lieu of any of the requirements of paragraphs (a), (b), and (c) of this section for an irretrievable well-logging source.

### 44 FR 70408

Published 12/6/79

Comment period expires 3/3/80

*Disposal of High-Level Radioactive Wastes  
in Geologic Repositories; Proposed Licensing  
Procedures*

See Part 60 Proposed Rule Making.

### 45 FR 13739

Published 3/3/80

Comment period expires May 2, 1980

*Environmental Protection Regulations  
for Domestic Licensing and Related  
Regulatory Functions and Related  
Conforming Amendments*

See Part 51 Proposed Rule Making.

### 45 FR 15184

Published 3/10/80

Comment period expires 5/9/80

*Protection of Employees  
Who Provide Information*

See Part 19 Proposed Rule Making



**UNITED STATES NUCLEAR REGULATORY COMMISSION**  
**RULES and REGULATIONS**

**TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY**

**PART  
40**

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**AUTHORITY:** Secs. 62, 63, 64, 65, 161, 182, 183, 68 Stat. 932, 933, 948, 953, 954, as amended; (42 U.S.C. 2092, 2093, 2094, 2095, 2201, 2232, 2233); secs. 202, 206 88 Stat. 1244, 1246 (42 U.S.C. 5842, 5846) unless otherwise noted.

Section 40.46 also issued under sec. 184, 68 Stat. 954, as amended; 42 U.S.C. 2234. For the purposes of sec. 223, 68 Stat. 958, as amended; 42 U.S.C. 2273, § 40.41(c) issued under sec. 161b., 68 Stat. 948; 42 U.S.C. 2201(b) and §§ 40.23(e) (3), 40.61 and 40.62 issued under sec. 161o., 68 Stat. 950, as amended; 42, U.S.C. 2201(o). \* Section 40.31(g) also issued under Sec. 122, 68 Stat. 939, 42 U.S.C. 2152.

**GENERAL PROVISIONS**

§ 40.1 Purpose.

(a) The regulations in this Part establish procedures and criteria for the issuance of licenses to receive title to, receive, possess, use, transfer, or deliver source and byproduct materials, as defined in this Part, and establish and provide for the terms and conditions upon which the Commission will issue such licenses. The regulations in this Part do not establish procedures and criteria for the issuance of licenses for materials covered under Title I of the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 3021).

40.2 Scope.

Except as provided in §§ 40.11 to 40.14, inclusive, the regulations in this part apply to all persons in the United States.

\* Amended 45 FR 50705

§ 40.2a Coverage of inactive tailings sites.

(a) Prior to the completion of the remedial action, the Commission will not require a license pursuant to this Part for possession of byproduct material as defined in this Part that is located at a site where milling operations are no longer active, if the site is designated a processing site covered by the remedial action program of Title I of the Uranium Mill Tailings Radiation Control Act of 1978. The Commission will exert its regulatory role in remedial actions primarily through concurrence and consultation in the execution of the remedial action pursuant to Title I of the Uranium Mill Tailings Radiation Control Act of 1978.

(b) The Commission will regulate byproduct material as defined in this Part that is located at a site where milling operations are no longer active, if such site is not covered by the remedial action program of Title I of the Uranium Mill Tailings Radiation Control Act of 1978. The criteria in Appendix A of this Part will be applied to such sites.

§ 40.3 License requirements.

No person subject to the regulations in this Part shall receive title to, own, receive, possess, use, transfer, or deliver byproduct material as defined in this Part or any source material after removal from its place of deposit in nature, except as authorized in a specific or general license issued by the Commission pursuant to the regulations in this Part.

## PART 40 • DOMESTIC LICENSING OF SOURCE MATERIAL

### § 40.4 Definitions.

As used in this part:

(a) "Act" means the Atomic Energy Act of 1954 (68 Stat. 919), including any amendments thereto;

(a-1) "Byproduct Material" means the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by such solution extraction operations do not constitute "byproduct material" within this definition.

(b) "Commission" means the Nuclear Regulatory Commission or its duly authorized representatives;

(b-1) "Department" and "Department of Energy" means the Department of Energy established by the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565, 42 U.S.C. 7101 *et seq.*) to the extent that the Department, or its duly authorized representatives, exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers and components and transferred to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104 (b), (c) and (d) of the Energy Reorganization Act of 1974 (Pub. L. 93-438, 88 Stat. 1233 at 1237, 42 U.S.C. 5814) and retransferred to the Secretary of Energy pursuant to section 301(a) of the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565 at 577-578, 42 U.S.C. 7151).

(c) "Government agency" means an executive department, commission, independent establishment, corporation wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government;

(d) "License", except where otherwise specified, means a license issued pursuant to the regulations in this part;

(e) "Persons" means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the Department of Energy except that the Department of Energy shall be considered a person within the meaning of the regulations in this Part to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244)<sup>1</sup> and the Uranium Mill Tailings

Radiation Control Act of 1978 (92 Stat. 3021), any State or any political subdivision of, or any political entity within a State, any foreign government or nation or any subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent or agency of the foregoing.

(f) "Pharmacist" means an individual registered by a state or territory of the United States, the District of Columbia or the Commonwealth of Puerto Rico to compound and dispense drugs, prescriptions and poisons.

<sup>1</sup> The Department of Energy facilities and activities identified in section 202 are:

(1) Demonstration Liquid Metal Fast Breeder reactors when operated as part of the power generation facilities of an electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such a reactor.

(2) Other demonstration nuclear reactors, except those in existence on January 19, 1975, when operated as part of the power generation facilities of an electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such a reactor.

(3) Facilities used primarily for the receipt and storage of high-level radioactive wastes resulting from licensed activities.

(4) Retrieval Surface Storage Facilities and other facilities authorized for the express purpose of subsequent long-term storage of high-level radioactive waste generated by the Department of Energy, which are not used for, or are part of, research and development activities.



## PART 40 • DOMESTIC LICENSING OF SOURCE MATERIAL

(g) "Physician" means an individual licensed by a state or territory of the United States, the District of Columbia or the Commonwealth of Puerto Rico to dispense drugs in the practice of medicine.

(h) "Source Material" means (1) uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores which contain by weight one-twentieth of one percent (0.05%) or more of (i) uranium, (ii) thorium or (iii) any combination thereof. Source material does not include special nuclear material.

(i) "Special nuclear material" means (1) plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material; or (2) any material\* artificially enriched by any of the foregoing;

(j) "United States," when used in a geographical sense, includes all territories and possessions of the United States, and Puerto Rico;

(k) "Unrefined and unprocessed ore" means ore in its natural form prior to any processing, such as grinding, roasting or beneficiating, or refining;

(l) With the exception of "byproduct material" as defined in Section 11e. of the Act, other terms defined in Section 11 of the Act shall have the same meaning when used in the regulations in this Part.

(m) "Agreement State" means any State with which the Atomic Energy Commission or the Nuclear Regulatory Commission has entered into an effective agreement under subsection 274b. of the Atomic Energy Act of 1954, as amended.

(n) "Commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the natural environment of a site but does not include changes desirable for the temporary use of the land for public recreational uses, necessary borings to determine site characteristics or other preconstruction monitoring to establish background information related to the suitability of a site or to the protection of environmental values.

(o) "Depleted uranium" means the source material uranium in which the isotope uranium-235 is less than 0.711 weight percent of the total uranium present. Depleted uranium does not include special nuclear material.

(p) "Uranium Milling" means any activity that results in the production of byproduct material as defined in this Part.

(q) "Effective kilogram" means (1) for the source material uranium in which the uranium isotope uranium-235 is greater than 0.005 (0.5 weight percent) of the total uranium present: 10,000 kilograms, and (2) for any other source material: 20,000 kilograms.

### 40.5 Communications.

Except where otherwise specified in this part, all communications and reports concerning the regulations in this part, and applications filed under them, should be addressed to the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C., 20555. Communications, reports, and applications may be delivered in person at the Commission's offices at 1717 H Street NW., Washington, D.C.; or \*\*7920 Norfolk Avenue, Bethesda, Md.

### 40.6 Interpretations.

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

#### EXEMPTIONS†

#### 40.11 Persons using source material under certain \*\*\* Department of Energy and Nuclear Regulatory Commission Contracts.

Except to the extent that \*\*\*Department facilities or activities of the types subject to licensing pursuant to section 202 of the Energy Reorganization Act of 1974 or the Uranium Mill Tailings Radiation Control Act of 1978 are involved, any prime contractor of the \*\*\* Department is exempt from the requirements for a license set forth in

sections 62, 63, and 64 of the Acts and from the regulations in this part to the extent that such contractor, under his prime contract with the \*\*\*Department receives, possesses, uses, transfers,

or delivers † source material for: (a) The performance of work for the \*\*\*Department at a United States

Government-owned or controlled site, including the transportation of source material or contract services during temporary interruptions of such transportation; (b) research in, or development, manufacture, storage, testing or

transportation of, atomic weapons or components thereof; or (c) the use or operation of nuclear reactors or other nuclear devices in a United States Government-owned vehicle or vessel. In addition to the foregoing exemptions,

and subject to the requirement for licensing of \*\*\*Department facilities and activities pursuant to section 202 of the Energy Reorganization Act of 1974 or the Uranium Mill Tailings Radiation Control Act of 1978 any

prime contractor or subcontractor of the \*\*\*Department or the Commission is exempt from the requirements for a license set forth in sections 62, 63, and 64 of the Acts and from the regulations in this part to the extent that such prime contractor or subcontractor receives, possesses, uses transfers, or delivers † source

material under his prime contract or subcontract when the Commission determines that the exemption of the prime contractor or subcontractor is authorized by law; and that, under the terms of the contract or subcontract there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.

### 40.12 Carriers.

Common and contract carriers, freight forwarders, warehousemen, and the U.S. Postal Service are exempt from the regulations in this part and the requirements for a license set forth in section 62 of the Act to the extent that they transport or store source material in the regular course of carriage for another or storage incident thereto.

### 40.13 Unimportant quantities of source material.

(a) Any person is exempt from the regulations in this part and from the requirements for a license set forth in section 62 of the Act to the extent that such person receives, possesses, uses,

† Amended 43 FR 6915.

\*\*\* Amended 45FR14199

\*Amended 31 FR 15145.

• \*\*\* Amended 45 FR 18905

† Amended 29 FR 14401.

\*\* Amended 34 FR 19546.

## PART 40 • DOMESTIC LICENSING OF SOURCE MATERIAL

transfers, or deliver<sup>†</sup> source material in any chemical mixture, compound, solution, or alloy in which the source material is by weight less than one-twentieth of 1 percent (0.05 percent) of the mixture, compound, solution or alloy.

\* The exemption contained in this paragraph does not include byproduct material as defined in this Part.

(b) Any person is exempt from the regulations in this part and from the requirements for a license set forth in section 62 of the act to the extent that such person receives, possesses, uses, or transfer<sup>†</sup> unrefined and unprocessed ore

containing source material; provided, that, except as authorized in a specific license, such person shall not refine or process such ore. †

(c) Any person is exempt from the regulation in this part and from the requirements for a license set forth in section 62 of the Act to the extent that such person receives, possesses, uses, or transfers:†

(1) Any quantities of thorium contained in (i) incandescent gas mantles, (ii) vacuum tubes, (iii) welding rods, (iv) electric lamps for illuminating purposes; *Provided*, That each lamp does not contain more than 50 milligrams of thorium, (v) germicidal lamps, sunlamps, and lamps for outdoor or industrial lighting; *Provided*, That each lamp does not contain more than 2 grams of thorium, (vi) rare earth metals and compounds, mixtures, and products containing not more than 0.25 percent by weight thorium, uranium, or any combination of these, or (vii) personnel neutron dosimeters; *Provided*, That each dosimeter does not contain more than 50 milligrams of thorium.

(2) Source material contained in the following products: (i) Glazed ceramic tableware, provided that the glaze contains not more than 20 percent by weight source material; (ii) piezoelectric ceramic containing not more than 2 percent by weight source material; (iii) glassware, glass enamel, and glass enamel frit containing not more than 10 percent by weight source material; but not including commercially manufactured glass brick, pane glass, ceramic tile, or other glass, glass enamel or ceramic used in construction;

(3) Photographic film, negatives, and prints containing uranium or thorium;

(4) Any finished product or part fabricated of, or containing tungsten or magnesium-thorium alloys, provided that the thorium content of the alloy does not exceed 4 percent by weight and

that the exemption contained in this subparagraph shall not be deemed to authorize the chemical, physical or metallurgical treatment or processing of any such product or part; and

(5) Uranium contained in counterweights installed in aircraft, rockets, projectiles, and missiles, or stored or handled in connection with installation or removal of such counterweights: *Provided*, That:

(i) The counterweights are manufactured in accordance with a specific license issued by the Commission or the Atomic Energy Commission authorizing distribution by the licensee pursuant to this subparagraph;

(ii) Each counterweight has been impressed with the following legend clearly legible through any plating or other covering: "Depleted Uranium";<sup>‡</sup>

(iii) Each counterweight is durably and legibly labeled or marked with the identification of the manufacturer, and the statement: "Unauthorized Alterations Prohibited";<sup>‡</sup> and

(iv) The exemption contained in this subparagraph shall not be deemed to authorize the chemical, physical, or metallurgical treatment or processing of any such counterweights other than repair or restoration of any plating or other covering.

(6) Uranium used as shielding constituting part of any shipping container which is conspicuously and legibly impressed with the legend "CAUTION—RADIOACTIVE SHIELDING—URANIUM" and which meets the specifications for containers for radioactive materials prescribed by § 178.250, Specification 55, Part 178 of the regulations of the\* Department of Transportation (49 CFR 178.250).

(7) Thorium contained in finished optical lenses, provided that each lens does not contain more than 30 percent by weight of thorium; and that the exemption contained in this subparagraph shall not be deemed to authorize either:

(i) The shaping, grinding or polishing of such lens or manufacturing processes other than the assembly of such lens into optical systems and devices without any alteration of the lens; or

(ii) The receipt, possession, use, or transfer<sup>†</sup> of thorium contained in contact lenses,

<sup>‡</sup>The requirements specified in subdivisions (ii) and (iii) of this subparagraph need not be met by counterweights manufactured prior to Dec. 31, 1969. *Provided*, That such counterweights were manufactured under a specific license issued by the Atomic Energy Commission and were impressed with the legend required by § 40.13(c) (5) (ii) in effect on June 30, 1969.

\*Amended 34 FR 19546

or in spectacles, or in eyepieces in binoculars or other optical instruments.

(8) Thorium contained in any finished aircraft engine part containing nickel-thoria alloy, provided that:

(i) The thorium is dispersed in the nickel-thoria alloy in the form of finely divided thorium (thorium dioxide); and

(ii) The thorium content in the nickel-thoria alloy does not exceed 4 percent by weight.

(9) The exemptions in this paragraph (c) do not authorize the manufacture of any of the products described.

(d) Any person is exempt from the regulations in this part and from the requirements for a license set forth in section 62 of the Act to the extent that such person receives, possesses, uses, or transfer<sup>†</sup> uranium contained in detector

heads for use in fire detection units, provided that each detector head contains not more than 0.005 microcurie of uranium. The exemption in this paragraph does not authorize the manufacture of any detector head containing uranium.

### § 40.14 Specific exemptions.

(a) The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulation in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

(b) \*Reserved.

\*Amended 45 FR 65521

†Amended 43 FR 6915.

‡Deleted 43 FR 6915.

## PART 40 • DOMESTIC LICENSING OF SOURCE MATERIAL

### GENERAL LICENSES

#### § 40.20 Types of licenses.

Licenses for source material are of two types: general and specific. The general licenses provided in this part are effective without the filing of applications with the Commission or the issuance of licensing documents to particular persons. Specific licenses are issued to named persons upon applications filed pursuant to the regulations in this part.

#### § 40.21 General license to receive title to source or byproduct material.

A general license is hereby issued authorizing the receipt of title to source or byproduct material, as defined in this Part, without regard to quantity. This general license does not authorize any person to receive, possess, deliver, use, or transfer source or byproduct material.

#### § 40.22 Small quantities of source material.

(a) A general license is hereby issued authorizing commercial and industrial firms, research, educational and medical institutions and Federal, State and local government agencies to use and transfer not more than fifteen (15) pounds of source material at any one time for research, development, educational, commercial or operational purposes. A person authorized to use or transfer source material, pursuant to this general license, may not receive more than a total of 150 pounds of source material in any one calendar year.

(b) Persons who receive, possess, use, or transfer source material pursuant to the general license issued in paragraph (a) of this section are exempt from the provisions of Parts 19, 20, and 21\* of this chapter to the extent that such receipt, possession, use or transfer are within the terms of such general license: *Provided, however,* That this exemption shall not be deemed to apply to any such person who is also in possession of source material under a specific license issued pursuant to this part.

(c) Persons who receive, possess, use or transfer source material pursuant to the general license in paragraph (a) of this section are prohibited from administering source material, or the radiation therefrom, either externally or internally, to human beings except as may be authorized by NRC in a specific license.

#### § 40.23 [Deleted 43 FR 6915.]

#### § 40.24 [Deleted 43 FR 6915.]

#### § 40.25 General license for use of certain industrial products or devices.

(a) A general license is hereby issued to receive, acquire, possess, use, or transfer, in accordance with the provisions of paragraphs (b), (c), (d), and (e) of this section, depleted uranium contained in industrial products or devices for the purpose of providing a concentrated mass in a small volume of the product or device.

(b) The general license in paragraph (a) of this section applies only to industrial products or devices which have been manufactured or initially transferred† in accordance with a specific license issued‡ pursuant to § 40.34(a) or in accordance with a specific license issued‡ by an

Agreement State which authorizes manufacture of the products or devices for distribution to persons generally licensed by the Agreement State.

(c) (1) Persons who receive, acquire, possess, or use depleted uranium pursuant to the general license established by paragraph (a) of this section shall file Form NRC 244, "Registration Certificate—Use of Depleted Uranium Under General License," with the Director of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. The form shall be submitted within 30 days after the first receipt or acquisition of such depleted uranium. The registrant shall furnish on Form NRC 244 the following information and such other information as may be required by that form:

(i) Name and address of the registrant;

(ii) A statement that the registrant has developed and will maintain procedures designed to establish physical control over the depleted uranium described in paragraph (a) of this section and designed to prevent transfer of such depleted uranium in any form, including metal scrap, to persons not authorized to receive the depleted uranium; and

(iii) Name and/or title, address, and telephone number of the individual duly authorized to act for and on behalf of the registrant in supervising the procedures identified in paragraph (c) (1) (ii) of this section.

(2) The registrant possessing or using depleted uranium under the general license established by paragraph (a) of this section shall report in writing to the Director of Inspection and Enforcement, any changes in information furnished by

‡ Deleted 43 FR 6915.

† Amended 43 FR 6915.

him in the Form NRC 244 "Registration Certificate—Use of Depleted Uranium Under General License." The report shall be submitted within 30 days after the effective date of such change.

(d) A person who receives, acquires, possesses, or uses depleted uranium pursuant to the general license established by paragraph (a) of this section:

(1) Shall not introduce such depleted uranium, in any form, into a chemical, physical, or metallurgical treatment or process, except a treatment or process for repair or restoration of any plating or other covering of the depleted uranium.

(2) Shall not abandon such depleted uranium.

(3) Shall transfer or dispose of such depleted uranium only by transfer in accordance with the provisions of § 40.51.

In the case where the transferee receives the depleted uranium pursuant to the general license established by paragraph (a) of this section, the transferor shall furnish the transferee a copy of this section and a copy of Form NRC 244. In the case where the transferee receives the depleted uranium pursuant to a general license contained in an Agreement State's regulation equivalent to this section, the transferor shall furnish the transferee a copy of this section and a copy of Form NRC 244 accompanied by a note explaining that use of the product or device is regulated by the Agreement State under requirements substantially the same as those in this section.

(4) Within 30 days of any transfer, shall report in writing to the Director of Inspection and Enforcement the name and address of the person receiving the source material pursuant to such transfer.

(5) [Deleted 43 FR 6915.]

(e) Any person receiving, acquiring, possessing, using, or transferring depleted uranium pursuant to the general license established by paragraph (a) of this section is exempt from the requirements of Parts 19, 20, and 21\* of this chapter with respect to the depleted uranium covered by that general license.

#### § 40.26 General license for possession and storage of byproduct material as defined in this Part.

(a) A general license is hereby issued to receive title to, own, or possess byproduct material as defined in this Part without regard to form or quantity.

(b) The general license in paragraph (a) of this section applies only:

In the case of licensees of the Commission, where activities that result in the production of byproduct material are authorized under a specific license issued by the Commission pursuant to this Part, to byproduct material possessed or stored at an authorized disposal containment area or transported incident to such authorized activity: *Provided,* that authority to receive title to, own, or possess byproduct material under this general

\* Amended 42 FR 28891.

† Amended 43 FR 6915.

## PART 40 • DOMESTIC LICENSING OF SOURCE MATERIAL

license shall terminate when the specific license for source material expires, is renewed, or is amended to include a specific license for byproduct material as defined in this Part.

(c) The general license in paragraph (a) of this section is subject to:

(1) The provisions of Parts 19, 20, 21, and §§ 40.1, 40.2, 40.2a, 40.3, 40.4, 40.5, 40.6, 40.41, 40.46, 40.61, 40.62, 40.63, 40.65, 40.71, and 40.81 of Part 40 of this Chapter; and

(2) The documentation of daily inspections of tailings or waste retention systems and the immediate notification of the appropriate NRC regional office as indicated in Appendix D of 10 CFR Part 20, or the Director, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, of any failure in a tailings or waste retention system which results in a release of tailings or waste into unrestricted areas, and/or of any unusual conditions (conditions not contemplated in the design of the retention system) which if not corrected could lead to failure of the system and result in a release of tailings or waste into unrestricted areas; and any additional requirements the Commission may by order deem necessary.

(d) The general license in paragraph (a) of this section shall expire nine months from the effective date of this subparagraph unless an applicable licensee has submitted, pursuant to the provisions of § 40.31 of this Part, an application for license renewal or amendment which includes a detailed program for meeting the technical and financial criteria contained in Appendix A of this Part.

### § 40.31 Applications for specific licenses.

(a) Applications for specific licenses should be filed in quadruplicate on Form NRC-2, "Application for Source Material License", §

with the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C., 20555. Application may be filed in person at the Commission's offices at\*\* 1717 H Street NW., Washington, D.C., or 7920 Norfolk Avenue, Bethesda, Md. Information contained in previous applications, statements or reports filed with the Commission may be incorporated by reference, provided that such references are clear and specific.

(b) The Commission may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the Commission to determine whether the application should be granted or denied or whether a license should be modified or revoked. All applications and statements shall be signed by the applicant or licensee or a person duly authorized to act for and on his behalf.

(c) Applications and documents submitted to the Commission in connection with applications will be made available for public inspection in accordance with the provisions of the regulations contained in Parts 2 and 9 of this chapter.

(d) An application for a license filed pursuant to the regulations in this part will be considered also as an application for licenses authorizing other activities for which licenses are required by the Act: *Provided*, That the application specifies the additional activities for which licenses are requested and complies with regulations of the Commission as to applications for such licenses.

(e) Each application for a source material license, other than a license exempted from Part 170 of this chapter, shall be accompanied by the fee prescribed in § 170.31 of this chapter. No fee will be required to accompany an application for renewal or amendment of a license, except as provided in § 170.31 of this chapter.

(f) An application for a license to possess and use source material for uranium milling, production of uranium hexafluoride, commercial waste disposal

by land burial or for the conduct of any other activity which the Commission determines will significantly affect the quality of the environment shall be filed at least 9 months prior to commencement of construction of the plant or facility in which the activity will be conducted and shall be accompanied by any Environmental Report required pursuant to Part 51\*\*\* of this chapter.

(g) An application for a license to receive, possess, and use source material for uranium or thorium milling or byproduct material, as defined in this Part, at sites formerly associated with such milling shall contain proposed written specifications relating to milling operations and the disposition of the byproduct material to achieve the requirements and objectives set forth in Appendix A of this Part. Each application must clearly demonstrate how the requirements and objectives set forth in Appendix A of this Part have been addressed. Failure to clearly demonstrate how the requirements and objectives in Appendix A have been addressed shall be grounds for refusing to accept an application.

### § 40.32 General requirements for issuance of specific licenses.†

An application for a specific license‡ will be approved if:

(a) The application is for a purpose authorized by the Act; and

(b) The applicant is qualified by reason of training and experience to use the source material for the purpose requested in such manner as to protect health and minimize danger to life or property; and

(c) The applicant's proposed equipment, facilities and procedures are adequate to protect health and minimize danger to life or property; and

(d) The issuance of the license will not be inimical to the common defense, and security or to the health and safety of the public; and

\*\*Amended 34 FR 19546.

\* Amended 43 FR 52201.

†Amended 41 FR 53330.

\*\*\*Amended 39 FR 26279.



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(e) In the case of an application for a license to possess and use source and byproduct material for uranium milling, production of uranium hexafluoride, commercial waste disposal by land burial or for the conduct of any other activity which the Commission determines will significantly affect the quality of the environment, the Director of Nuclear Material Safety and Safeguards or his designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made pursuant to Part 51 of this chapter, has concluded, after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to such a conclusion shall be grounds for denial of a license to possess and use source and byproduct material in such plant or facility. As used in this paragraph the term "commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the environment of a site. The term does not mean site exploration, necessary roads for site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the site or the protection of environmental values.

(f) The applicant satisfies any applicable special requirements contained in § 40.34.

§ 40.33 [Deleted 43 FR 6915.]

† Deleted 43 FR 6915.

\* Redesignated 43 FR 6915.

‡ Amended 43 FR 6915.

### § 40.34 Special requirements for issuance of specific licenses.

(a)\* An application for a specific license to manufacture industrial products and devices containing depleted uranium, or to initially transfer such products or devices, for use pursuant to § 40.25 or equivalent regulations of an Agreement State, will be approved if:

(1)\* The applicant satisfies the general requirements specified in § 40.32;

(2)\* The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control procedures, labeling or marking, proposed uses, and potential hazards of the industrial product or device to provide reasonable assurance that possession, use, or transfer of the depleted uranium in the product or device is not likely to cause any individual to receive in any period of one calendar quarter a radiation dose in excess of 10 percent of the limits specified in § 20.101(a) of this chapter; and

(3)\* The applicant submits sufficient information regarding the industrial product or device and the presence of depleted uranium for a mass-volume application in the product or device to provide reasonable assurance that unique benefits will accrue to the public because of the usefulness of the product or device.

(b)\* In the case of an industrial product or device whose unique benefits are questionable, the Commission will approve an application for a specific license under this paragraph only if the product or device is found to combine a high degree of utility and low probability of uncontrolled disposal and dispersal of significant quantities of depleted uranium into the environment.

(c)\* The Commission may deny an applicant for a specific license under this paragraph if the end uses of the industrial product or device cannot be reasonably foreseen.

### § 40.35 Conditions of specific licenses issued pursuant to § 40.34.

Each person licensed pursuant to § 40.34† shall:

(a)\* Maintain the level of quality control required by the license in the manufacture of the industrial product or device, and in the installation of the depleted uranium into the product or device;

(b)\* Label or mark each unit to: (1)\* Identify the manufacturer or initial transferor† of the product or device and the number of the license under which the product or device was manufactured or initially transferred‡; the fact that the product or device contains depleted uranium, and the quantity of depleted uranium in each product or device; and (2)\* State that the receipt, possession, use, and transfer of the product or device are subject to a general license or the equivalent and the regulations of the U.S. NRC or of an Agreement State;

(c)\* Assure that the depleted uranium

before being installed in each product or device has been impressed with the following legend clearly legible through any plating or other covering: "Depleted Uranium";

(d)(1)\* Furnish a copy of the general license contained in § 40.25 and a copy of Form NRC 244 to each person to whom he transfers source material in a product or device for use pursuant to the general license contained in § 40.25; or

(2)\* Furnish a copy of the general license contained in the Agreement State's regulation equivalent to § 40.25 and a copy of the Agreement State's certificate or alternately, furnish a copy of the general license contained in § 40.25 and a copy of Form NRC 244 to each person to whom he transfers source material in a product or device for use pursuant to the general license of an Agreement State. If a copy of the general license in § 40.25 and a copy of Form NRC 244 are furnished to such person, they shall be accompanied by a note explaining that use of the product or device is regulated by the Agreement State under requirements substantially the same as those in § 40.25; and

(e)(1)\* Report to the Director of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, all transfers of industrial products or devices to persons for use under the general license in § 40.25. Such report shall identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the Commission and the general licensee, the type and model number of device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within 30 days after the end of each calendar quarter in which such a product or device is transferred to the generally licensed person. If no transfers have been made to persons generally licensed under § 40.25 during the reporting period, the report shall so indicate;

(2)\* Report to the responsible Agreement State Agency all transfers of industrial products or devices to persons for use under the general license in the Agreement State's regulation equivalent to § 40.25. Such report shall identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the Agency and the general licensee, the type and model number of device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within 30 days after the end of each calendar quarter in which such product or device is transferred to the generally licensed person. If no transfer have been made to a particular Agreement State during the reporting period, this information shall be reported to the responsible Agreement State Agency;

(3)\* Keep records showing the name, address, and a point of contact for each general licensee to whom he transfers depleted uranium in industrial products or devices for use pursuant to the general license provided in § 40.25 or equivalent

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**40.47 [Deleted 40 FR 8774.]**

(3) For emergency shipments the transferor may accept oral certification by the transferee that he is authorized by license or registration certificate to

## PART 40 • DOMESTIC LICENSING OF SOURCE MATERIAL

receive the type, form, and quantity of source or byproduct material to be transferred, specifying the license or registration certificate number, issuing agency and expiration date: Provided, That the oral certification is confirmed in writing within 10 days:

(4) The transferor may obtain other sources of information compiled by a reporting service from official records of the Commission or the licensing agency of an Agreement State as to the identity of licensees and the scope and expiration dates of licenses and registrations; or

(5) When none of the methods of verification described in paragraphs (d)(1) to (4) of this section are readily available or when a transferor desires to verify that information received by one of such methods is correct or up-to-date, the transferor may obtain and record confirmation from the Commission or the licensing agency of an Agreement State that the transferee is licensed to receive the source or byproduct material.

### RECORDS, REPORTS, AND INSPECTIONS

#### § 40.61 Records.

(a) Each person who receives source or byproduct material pursuant to a license issued pursuant to the regulations in this part shall keep records showing the receipt, transfer, and disposal of such source or byproduct material.

(b) Records which are required by the regulations in this part or by license condition shall be maintained for the period specified by the appropriate regulation or license condition. If a retention period is not otherwise specified by regulation or license condition, such records shall be maintained until the Commission authorizes their disposition.

(c)(1) Records of receipt of source or byproduct material which must be maintained pursuant to paragraph (a) of this section shall be maintained as long as the licensee retains possession of the source or byproduct material and for five years following transfer, or disposition of the source of byproduct material.

(2) [Reserved]

(3) Records of transfer of source or byproduct material shall be maintained by the licensee who transferred the material until the Commission authorizes their disposition.

(4) Records of disposal of source or byproduct material shall be maintained in accordance with § 20.401(c) of this chapter.

(5) If source or byproduct material is combined or mixed with other licensed material and subsequently treated in a manner which makes direct correlation of a receipt record with a transfer, export, or disposition record impossible, evaluative techniques such as first-in-first-out may be used for purposes of the records retention requirements of this paragraph.

(d)(1) Records which must be maintained pursuant to this part may be the original or reproduced copy or microform if such reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified by Commission regulations.

(2) If there is a conflict between the Commission's regulations in this part, license condition, or other written Commission approval or authorization pertaining to the retention period for the same type of record, the retention period specified in the regulations in this part for such records shall apply unless the Commission, pursuant to § 40.14, has granted a specific exemption from the record retention requirements specified in the regulations in this part.

#### § 40.62 Inspections.

(a) Each licensee shall afford to the Commission at all reasonable times opportunity to inspect source or byproduct material and the premises and facilities wherein source or byproduct material is used or stored.

(b) Each licensee shall make available to the Commission for inspection, upon reasonable notice, records kept by him pursuant to the regulations in this chapter.

#### § 40.63 Tests.

Each licensee shall perform, or permit the Commission to perform, such tests as the Commission deems appropriate or necessary for the administration of the regulations in this part, including tests of:

- (a) Source or byproduct material;
- (b) Facilities wherein source or byproduct material is utilized or stored;
- (c) Radiation detection and monitoring instruments; and
- (d) Other equipment and devices used in connection with the utilization and storage of source or byproduct material.

## PART 40 • DOMESTIC LICENSING OF SOURCE MATERIAL

### § 40.64 Reports.

(a) Except as specified in paragraphs (d) and (e) of this section,

\*\* each licensee who transfers or receives at any one time 1,000 kilograms

or more of uranium or thorium, or any combination thereof, shall complete and distribute a Nuclear Material Transaction \* Report on Form NRC-741, in accordance with the printed instructions for completing the form. Each licensee who transfers such material shall submit a completed copy of Form NRC-741 to the Commission and three copies to the receiver of the material promptly after the transfer takes place. Each licensee who receives such material shall submit a completed copy of Form NRC-741 to the Commission and to the shipper of the material within ten (10) days after the material is received. The Commission's copies of the reports shall be submitted to the \*\*\* Department, Post Office Box E, Oak Ridge, TN 37830.

(b) Except as specified in paragraphs (d) and (e) of this section, each

licensee who is authorized to possess at any one time and location more than 1,000 kilograms of uranium or thorium, or any combination thereof shall submit to the Commission within 30 days after September 30<sup>th</sup> of each year a statement of his source material inventory.

The reports shall be submitted to the \*\*\* Department, Post Office Box E, Oak Ridge, Tenn. 37830, and shall include the Reporting Identification Symbol (RIS) assigned by the Commission to the licensee.

(c) Except as specified in paragraph (d) of this section, each licensee who is authorized to possess uranium or thorium pursuant to a specific license shall report promptly to the appropriate NRC Regional Office listed in Appendix D of Part 20 of this chapter by telephone and telegraph, mailgram, or facsimile any incident in which an attempt has been made or is believed to have been made to commit a theft or unlawful diversion of more than 15 pounds of such material at any one time or more than 150 pounds of such material in any one calendar year. The initial report shall be followed within a period of fifteen (15) days by a written report submitted to the appropriate NRC Regional Office which sets forth the details of the incident and its conse-

quences. A copy of such written report shall be sent to the Director of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

Subsequent to the submission of the written report required by this paragraph, the licensee shall promptly inform the Director of Inspection and Enforcement by means of a written report of any substantive additional information, which becomes available to the licensee, concerning an attempted or apparent theft or unlawful diversion of source material.

(d) The reports described in paragraphs (a), (b), and (c) of this section are not required for:

(1) Processed ores containing less than five (5) percent of uranium or thorium, or any combination thereof, by dry weight;

(2) Thorium contained in magnesium-thorium and tungsten-thorium alloys, provided that the thorium content in the alloys does not exceed 4 percent by weight; or

(3) Chemical catalysts containing uranium depleted in the U<sup>235</sup> isotope to 0.4 percent or less, provided that the uranium content of the catalyst does not exceed 15 percent by weight.

➤ (e) Any licensee who is required to submit inventory change reports and material status reports pursuant to Part 75 of this chapter (pertaining to implementation of the US/IAEA Safeguards Agreement) shall prepare and submit such reports only as provided in § 75.34 and § 75.35 (instead of as provided in paragraphs (a) and (b) of this section).

### § 40.65 Effluent monitoring reporting requirements.

(a) Each licensee authorized to possess and use source material in uranium milling or production of uranium hexafluoride, shall:

(1) Submit a report to the appropriate NRC regional office shown in Appendix D of Part 20 of this chapter, with copies to the Director of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555,† within 60 days after January 1, 1976, and July 1, 1976,† and

within 60 days after January 1 and July 1 of each year thereafter, specifying the quantity of each of the principal radionuclides released to unrestricted areas in liquid and in gaseous effluents during the previous six months of operation, and such other information the Commission may require to estimate maximum potential annual radiation doses to the public resulting from effluent releases. If quantities of radioactive materials released during the reporting period are significantly above the licensee's design objectives previously reviewed as part of the licensing action, the report shall cover this specifically. On the basis of such reports and any additional information the Commission may obtain from the licensee or others, the Commission may from time to time require the licensee to take such action as the Commission deems appropriate.

### MODIFICATION AND REVOCATION OF LICENSES

#### § 40.71 Modification, revocation and termination of licenses.

(a) The terms and conditions of each license shall be subject to amendment, revision, or modification by reason of amendments to the Act, or by reason of rules, regulations, or orders issued in accordance with the Act.

(b) Any license may be revoked, suspended, or modified, in whole or in part for any material false statement in the application or any statement of fact required under section 182 of the Act, or because of conditions revealed by such application or statement of fact or any report, record, or inspection or other means which would warrant the Commission to refuse to grant a license on an original application, or for violation of, or failure to observe any of, the terms and conditions of the Act, or the license or of any rule, regulation or order of the Commission.

(c) Except in cases of willfulness or those in which the public health, interest or safety requires otherwise, no license shall be modified, suspended, or revoked unless, prior to the institution of proceedings therefor, facts or conduct which may warrant such action shall have been called to the attention of the licensee in writing and the licensee shall have been accorded opportunity to demonstrate or achieve compliance with all lawful requirements.

(d) The Commission may terminate a specific license upon request submitted by the licensee to the Commission in writing.

\* Amended by 38 FR 2330.

† Amended 42 FR 33265.

\*\* Amended 43 FR 6915.

\*\*\* Amended 45 FR 14199

† Amended 41 FR 21627.



## PART 40 • DOMESTIC LICENSING OF SOURCE MATERIAL

### ENFORCEMENT

#### § 40.81 Violations.

An injunction or other court order may be obtained prohibiting any violation of any provision of the Atomic Energy Act of 1954, as amended, or Title II of the Energy Reorganization Act of 1974, or any regulation or order issued thereunder. A court order may be obtained for the payment of a civil penalty imposed pursuant to section 234 of the Act for violation of section 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Act, or section 206 of the Energy Reorganization Act of 1974, or any rule, regulation, or order issued thereunder, or any term, condition, or limitation of any license issued thereunder, or for any violation for which a license may be revoked under section 186 of the Act. Any person who willfully violates any provision of the Act or any regulation or order issued thereunder may be guilty of a crime and, upon conviction, may be punished by fine or imprisonment or both, as provided by law.

#### Appendix A to Part 40

Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentration of Source Material From Ores Processed Primarily for Their Source Material Content.

Introduction. Every applicant for a license to possess and use source material in conjunction with uranium or thorium milling, or byproduct material at sites formerly associated with such milling, is required by the provisions of § 40.31(g) to include in a license application proposed specifications relating to milling operations and the disposition of tailings or waste resulting from such milling activities. This appendix establishes technical, financial, ownership, and long term site surveillance criteria relating to the siting, operation, decontamination, decommissioning, and reclamation of mills and tailings or waste systems and sites at which such mills and systems are located. As used in this appendix, the term "as low as is reasonably achievable" has the same meaning as in paragraph 20.1(c) of 10 CFR 20 of this Chapter.

In many cases, flexibility is provided in the criteria to allow achieving an optimum tailings disposal program on a site specific basis. However, in such cases the objectives, technical alternatives, and concerns which must be taken into account in developing a tailings program are identified. As provided by the provisions of § 40.31(g), applications for licenses must clearly demonstrate how the criteria have been addressed.

The specifications shall be developed considering the expected full capacity of tailings or waste systems and the lifetime of

mill operations. Where later expansions of systems or operations may be likely (for example, where large quantities of ore now marginally uneconomical may be stockpiled), the amendability of the disposal system to accommodate increased capacities without degradation in long term stability and other performance factors shall be evaluated.

Detailed programs meeting the technical and financial criteria in this Appendix, including appropriate supporting data, analyses, and alternatives, shall be developed by existing uranium milling licensees and filed with the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, in connection with license renewal applications or within nine months from the effective date of this Appendix, whichever occurs first.

#### I. Technical Criteria

Criterion 1—In selecting among alternative tailings disposal sites or judging the adequacy of existing tailings sites, the following site features, which will determine the extent to which a program meets the broad objective of isolating the tailings and associated contaminants from man and the environment during operations and for thousands of years thereafter without ongoing active maintenance, shall be considered:

- remoteness from populated areas;
- hydrologic and other natural conditions as they contribute to continued immobilization and isolation of contaminants from usable groundwater sources; and
- potential for minimizing erosion, disturbance, and dispersion by natural forces over the long term.

The site selection process shall be an optimization to the maximum extent reasonably achievable in terms of these features.

In the selection of disposal sites, primary emphasis shall be given to isolation of tailings or wastes, a matter having long term impacts, as opposed to consideration only of short term convenience or benefits, such as minimization of transportation or land acquisition costs. While isolation of tailings will be a function of both site and engineering design, overriding consideration shall be given to siting features given the long term nature of the tailings hazards.

Tailings shall be disposed of in a manner that no active maintenance is required to preserve conditions of the site.

Criterion 2—To avoid proliferation of small waste disposal sites and thereby reduce perpetual surveillance obligations, byproduct material from in situ extraction operations, such as residues from solution evaporation or contaminated control processes, and wastes from small remote above ground extraction operations shall be disposed of at existing large mill tailings disposal sites; unless, considering the nature of the wastes, such as their volume and specific activity, and the costs and environmental impacts of transporting the wastes to a large disposal site, such offsite disposal is demonstrated to be impracticable or the advantages of onsite burial clearly outweigh the benefits of reducing the perpetual surveillance obligations.

Criterion 3—The "prime option" for disposal of tailings is placement below grade,

either in mines or specially excavated pits (that is, where the need for any specially constructed retention structure is eliminated).

The evaluation of alternative sites and disposal methods performed by mill operators in support of their proposed tailings disposal program (provided in applicants' environmental reports) shall reflect serious consideration of this disposal mode. In some instances, below grade disposal may not be the most environmentally sound approach, such as might be the case if a high quality groundwater formation is relatively close to the surface or not very well isolated by overlying soils and rock. Also, geologic and topographic conditions might make full below grade burial impracticable; for example, bedrock may be sufficiently near the surface that blasting would be required to excavate a disposal pit at excessive cost, and more suitable alternate sites are not available. Where full below grade burial is not practicable, the size of retention structures, and size and steepness of slopes of associated exposed embankments, shall be minimized by excavation to the maximum extent reasonably achievable or appropriate given the geologic and hydrologic conditions at a site. In these cases, it must be demonstrated that an above grade disposal program will provide reasonably equivalent isolation of the tailings from natural erosional forces.

Criterion 4—The following site and design criteria shall be adhered to whether tailings or wastes are disposed of above or below grade:

(a) Upstream rainfall catchment areas must be minimized to decrease erosion potential and the size of the maximum possible flood which could erode or wash out sections of the tailings disposal area.

(b) Topographic features should provide good wind protection.

(c) Embankment and cover slopes shall be relatively flat after final stabilization to minimize erosion potential and to provide conservative factors of safety assuring long term stability. The broad objective should be to contour final slopes to grades which are as close as possible to those which would be provided if tailings were disposed of below grade; this could, for example, lead to slopes of about 10 horizontal to 1 vertical (10h:1v) or less steep. In general, slopes should not be steeper than about 5h:1v. Where steeper slopes are proposed, reasons why a slope less steep than 5h:1v would be impracticable should be provided, and compensating factors and conditions which make such slopes acceptable should be identified.

(d) A full self-sustaining vegetative cover shall be established or rock cover employed to reduce wind and water erosion to negligible levels.

Where a full vegetative cover is not likely to be self-sustaining due to climatic or other conditions, such as in semi-arid and arid regions, rock cover shall be employed on slopes of the impoundment system. The NRC will consider relaxing this requirement for extremely gentle slopes such as those which may exist on the top of the pile.

The following factors shall be considered in establishing the final rock cover design to avoid displacement of rock particles by human and animal traffic or by natural processes, and to preclude undercutting and piping:

**Note.**—The reporting and record keeping requirements contained in this part have been approved by the General Accounting Office under B-180225 (R0128), (R0147), (R0203), (R0413), (R0040).

## PART 40 • DOMESTIC LICENSING OF SOURCE MATERIAL

- shape, size, composition, and gradation of rock particles (excepting bedding material average particles size shall be at least cobble size or greater);

- rock cover thickness and zoning of particles by size; and
- steepness of underlying slopes.

Individual rock fragments shall be dense, sound, and resistant to abrasion, and shall be free from cracks, seams, and other defects that would tend to unduly increase their destruction by water and frost actions. Weak, friable, or laminated aggregate shall not be used. Shale, rock laminated with shale, and cherts shall not be used.

Rock covering of slopes may not be required where top covers are very thick (on the order of 10m or greater); impoundment slopes are very gentle (on the order of 10 h:1v or less); bulk cover materials have inherently favorable erosion resistance characteristics; and, there is negligible drainage catchment area upstream of the pile and good wind protection as described in points (a) and (b) of this Criterion.

Furthermore, all impoundment surfaces shall be contoured to avoid areas of concentrated surface runoff or abrupt or sharp changes in slope gradient. In addition to rock cover on slopes, areas toward which surface runoff might be directed shall be well protected with substantial rock cover (rip rap). In addition to providing for stability of the impoundment system itself, overall stability, erosion potential, and geomorphology of surrounding terrain shall be evaluated to assure that there are not ongoing or potential processes, such as gully erosion, which would lead to impoundment instability.

(e) The impoundment shall not be located near a capable fault that could cause a maximum credible earthquake larger than that which the impoundment could reasonably be expected to withstand. As used in this criterion, the term "capable fault" has the same meaning as defined in § III(g) of Appendix A of 10 CFR 100. The term "maximum credible earthquake" means that earthquake which would cause the maximum vibratory ground motion based upon an evaluation of earthquake potential considering the regional and local geology and seismology and specific characteristics of local subsurface material.

(f) The impoundment, where feasible, should be designed to incorporate features which will promote deposition. For example, design features which promote deposition of sediment suspended in any runoff which flows into the impoundment area might be utilized; the object of such a design feature would be to enhance the thickness of cover over time.

Criterion 5—Steps shall be taken to reduce seepage of toxic materials into groundwater to the maximum extent reasonably achievable. Any seepage which does occur shall not result in deterioration of existing groundwater supplies from their current or potential uses. The following shall be considered in order to accomplish this objective:

- installation of low permeability bottom liners (Where synthetic liners are used, a leakage detection system shall be installed

immediately below the liner to ensure major failures are detected if they occur. This is in addition to the groundwater monitoring program conducted as provided in Criterion 7. Where clay liners are proposed or relatively thin in-situ clay soils are to be relied upon for seepage control, tests shall be conducted with representative tailings solutions and clay materials to confirm that no significant deterioration of permeability or stability properties will occur with continuous exposure of clay to tailings solutions. Tests shall be run for a sufficient period of time to reveal any effects if they are going to occur (in some cases, deterioration has been observed to occur rather rapidly after about nine months of exposure)).

- mill process designs which provide the maximum practicable recycle of solutions and conservation of water to reduce the net input of liquid to the tailings impoundment.

- dewatering of tailings by process devices and/or in-situ drainage systems (At new sites, tailings shall be dewatered by a drainage system installed at the bottom of the impoundment to lower the phreatic surface and reduce the driving head for seepage, unless tests show tailings are not amenable to such a system. Where in-situ dewatering is to be conducted, the impoundment bottom shall be graded to assure that the drains are at a low point. The drains shall be protected by suitable filter materials to assure that drains remain free running. The drainage system shall also be adequately sized to assure good drainage.).

- neutralization to promote immobilization of toxic substances.

Where groundwater impacts are occurring at an existing site due to seepage, action shall be taken to alleviate conditions that lead to excessive seepage impacts and restore groundwater quality to its potential use before milling operations began to the maximum extent practicable. The specific seepage control and groundwater protection method, or combination of methods, to be used must be worked out on a site-specific basis. Technical specifications shall be prepared to control installation of seepage control systems. A quality assurance, testing, and inspection program, which includes supervision by a qualified engineer or scientist, shall be established to assure the specifications are met.

While the primary method of protecting groundwater shall be isolation of tailings and tailings solutions, disposal involving contact with groundwater will be considered provided supporting tests and analyses are presented demonstrating that the proposed disposal and treatment methods will not degrade groundwater from current or potential uses.

In support of a tailings disposal system proposal, the applicant/operator shall supply information concerning the following:

- The chemical and radioactive characteristics of the waste solutions.

- The characteristics of the underlying soil and geologic formations particularly as they will control transport of contaminants and solutions. This shall include detailed information concerning extent, thickness, uniformity, shape, and orientation of underlying strata. Hydraulic gradients and

conductivities of the various formations shall be determined.

This information shall be gathered from borings and field survey methods taken within the proposed impoundment area and in surrounding areas where contaminants might migrate to usable groundwater. The information gathered on boreholes shall include both geologic and geophysical logs in sufficient number and degree of sophistication to allow determining significant discontinuities, fractures, and channelled deposits of high hydraulic conductivity. If field survey methods are used, they should be in addition to and calibrated with borehole logging. Hydrologic parameters such as permeability shall not be determined on the basis of laboratory analysis of samples alone; a sufficient amount of field testing (e.g., pump tests) shall be conducted to assure actual field properties are adequately understood. Testing shall be conducted to allow estimating chemisorption attenuation properties of underlying soil and rock.

- Location, extent, quality, capacity and current uses of any groundwater at and near the site.

Furthermore, steps shall be taken during stockpiling of ore to minimize penetration of radionuclides into underlying soils; suitable methods include lining and/or compaction of ore storage areas.

Criterion 6—Sufficient earth cover, but not less than three meters, shall be placed over tailings or wastes at the end of milling operations to result in a calculated reduction in surface exhalation of radon emanating from the tailings or wastes to less than two picocuries per square meter per second. In computing required tailings cover thicknesses, moisture in soils in excess of amounts found normally in similar soils in similar circumstances shall not be considered. Direct gamma exposure from the tailings or wastes should be reduced to background levels. The effects of any thin synthetic layer shall not be taken into account in determining the calculated radon exhalation level. If non-soiled materials are proposed to reduce tailings covers to less than three meters, it must be demonstrated that such materials will not crack or degrade by differential settlement, weathering, or other mechanism, over long term time intervals. Near surface cover materials (i.e., within the top three meters) shall not include mine waste or rock that contains elevated levels of radium; soils used for near surface cover must be essentially the same, as far as radioactivity is concerned, as that of surrounding surface soils. This is to ensure that surface radon exhalation is not significantly above background because of the cover material itself.

Criterion 7—At least one full year prior to any major site construction, a preoperational monitoring program shall be conducted to provide complete baseline data on a milling site and its environs. Throughout the construction and operating phases of the mill, an operational monitoring program shall be conducted to measure or evaluate compliance with applicable standards and regulations; to evaluate performance of control systems and procedures; to evaluate environmental

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impacts of operation; and to detect potential long term effects.

Criterion 8—Milling operations shall be conducted so that all airborne effluent releases are reduced to levels as low as is reasonably achievable. The primary means of accomplishing this shall be by means of emission controls. Institutional controls, such as extending the site boundary and exclusion area, may be employed to ensure that offsite exposure limits are met, but only after all practicable measures have been taken to control emissions at the source.

Notwithstanding the existence of individual dose standards, strict control of emissions is necessary to assure that population exposures are reduced to the maximum extent reasonably achievable and to avoid site contamination. The greatest potential sources of offsite radiation exposure (aside from radon exposure) are dusting from dry surfaces of the tailings disposal area not covered by tailings solution and emissions from yellowcake drying and packaging operations.

Checks shall be made and logged hourly of all parameters (e.g., differential pressures and scrubber water flow rates) which determine the efficiency of yellowcake stack emission control equipment operation. It shall be determined whether or not conditions are within a range prescribed to ensure that the equipment is operating consistently near peak efficiency; corrective action shall be taken when performance is outside of prescribed ranges. Effluent control devices shall be operative at all times during drying and packaging operations and whenever air is exhausting from the yellowcake stack. Drying and packaging operations shall terminate when controls are inoperative. When checks indicate the equipment is not operating within the range prescribed for peak efficiency, actions shall be taken to restore parameters to the prescribed range. When this cannot be done without shutdown and repairs, drying and packaging operations shall cease as soon as practicable. Operations may not be re-started after cessation due to off-normal performance until needed corrective actions have been identified and implemented. All such cessations, corrective actions, and re-starts shall be reported to the appropriate NRC regional office as indicated in Criterion 8A, in writing, within 10 days of the subsequent restart.

To control dusting from tailings, that portion not covered by standing liquids shall be wetted or chemically stabilized to prevent or minimize blowing and dusting to the maximum extent reasonably achievable. This requirement may be relaxed if tailings are effectively sheltered from wind, such as may be the case where they are disposed of below grade and the tailings surface is not exposed to wind. Consideration shall be given in planning tailings disposal programs to methods which would allow phased covering and reclamation of tailings impoundments since this will help in controlling particulate and radon emissions during operation. To control dusting from diffuse sources, such as tailings and ore pads where automatic controls do not apply, operators shall develop written operating procedures specifying the methods of control which will be utilized.

Criterion 8A—Daily inspections of tailings or waste retention systems shall be conducted by a qualified engineer or scientist and documented. The appropriate NRC regional office as indicated in Appendix D of 10 CFR Part 20, or the Director, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, shall be immediately notified of any failure in a tailings or waste retention system which results in a release of tailings or waste into unrestricted areas, and/or of any unusual conditions (conditions not contemplated in the design of the retention system) which if not corrected could indicate the potential or lead to failure of the system and result in a release of tailings or waste into unrestricted areas.

### II. Financial Criteria

Criterion 9—Financial surety arrangements shall be established by each mill operator prior to the commencement of operations to assure that sufficient funds will be available to carry out the decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas. The amount of funds to be ensured by such surety arrangements shall be based on Commission-approved cost estimates in a Commission-approved plan for (1) decontamination and decommissioning of mill buildings and the milling site to levels which would allow unrestricted use of these areas upon decommissioning, and (2) the reclamation of tailings and/or waste disposal areas in accordance with technical criteria delineated in Section I of this Appendix. The licensee shall submit this plan in conjunction with an environmental report that addresses the expected environmental impacts of the milling operation, decommissioning and tailings reclamation, and evaluates alternatives for mitigating these impacts. The surety shall also cover the payment of the charge for long term surveillance and control required by Criterion 10. In establishing specific surety arrangements, the licensee's cost estimates shall take into account total costs that would be incurred if an independent contractor were hired to perform the decommissioning and reclamation work. In order to avoid unnecessary duplication and expense, the Commission may accept financial sureties that have been consolidated with financial or surety arrangements established to meet requirements of other Federal or state agencies and/or local governing bodies for such decommissioning, decontamination, reclamation, and long term site surveillance and control, provided such arrangements are considered adequate to satisfy these requirements and that the portion of the surety which covers the decommissioning and reclamation of the mill, mill tailings site and associated areas, and the long term funding charge is clearly identified and committed for use in accomplishing these activities. The licensee's surety mechanism will be reviewed annually by the Commission to assure that sufficient funds would be available for completion of the reclamation plan if the work had to be performed by an independent contractor. The amount of surety liability should be adjusted to recognize any

increases or decreases resulting from inflation, changes in engineering plans, activities performed, and any other conditions affecting costs. Regardless of whether reclamation is phased through the life of the operation or takes place at the end of operations, an appropriate portion of surety liability shall be retained until final compliance with the reclamation plan is determined. This will yield a surety that is at least sufficient at all times to cover the costs of decommissioning and reclamation of the areas that are expected to be disturbed before the next license renewal. The term of the surety mechanism must be open ended, unless it can be demonstrated that another arrangement would provide an equivalent level of assurance. This assurance could be provided with a surety instrument which is written for a specified period of time (e.g., five years) yet which must be automatically renewed unless the surety notifies the beneficiary (the Commission or the State regulatory agency) and the principal (the licensee) some reasonable time (e.g., 90 days) prior to the renewal date of their intention not to renew. In such a situation the surety requirement still exists and the licensee would be required to submit an acceptable replacement surety within a brief period of time to allow at least 60 days for the regulatory agency to collect.

Proof of forfeiture must not be necessary to collect the surety so that in the event that the licensee could not provide an acceptable replacement surety within the required time, the surety shall be automatically collected prior to its expiration. The conditions described above would have to be clearly stated on any surety instrument which is not open-ended, and must be agreed to by all parties. Financial surety arrangements generally acceptable to the Commission are:

- (a) Surety bonds;
- (b) Cash deposits;
- (c) Certificates of deposit;
- (d) Deposits of government securities;
- (e) Irrevocable letters or lines of credit; and
- (f) Combinations of the above or such other

types of arrangements as may be approved by the Commission. However, self insurance, or any arrangement which essentially constitutes self insurance (e.g., a contract with a state or federal agency), will not satisfy the surety requirement since this provides no additional assurance other than that which already exists through license requirements.

Criterion 10—A minimum charge of \$250,000 (1978 dollars) to cover the costs of long term surveillance shall be paid by each mill operator to the general treasury of the United States or to an appropriate State agency prior to the termination of a uranium or thorium mill license.

If site surveillance or control requirements at a particular site are determined, on the basis of a site-specific evaluation, to be significantly greater than those specified in Criterion 12, (e.g., if fencing is determined to be necessary) variance in funding requirements may be specified by the Commission. In any case, the total charge to cover the costs of long term surveillance shall be such that, with and assumed 1 percent annual real interest rate, the collected funds

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will yield interest in an amount sufficient to cover the annual costs of site surveillance. The total charge will be adjusted annually prior to actual payment to recognize inflation. The inflation rate to be used is that indicated by the change in the Consumer Price Index published by the U.S. Department of Labor, Bureau of Labor Statistics.

### III. Site and Byproduct Material Ownership

Criterion 11—A. These criteria relating to ownership of tailings and their disposal sites become effective on November 8, 1981, and apply to all licenses terminated, issued, or renewed after that date.

B. Any uranium or thorium milling license or tailings license shall contain such terms and conditions as the Commission determines necessary to assure that prior to termination of the license, the licensee will comply with ownership requirements of this criterion for sites used for tailings disposal.

C. Title to the byproduct material licensed under this Part and land, including any interests therein (other than land owned by the United States or by a State) which is used for the disposal of any such byproduct material, or is essential to ensure the long term stability of such disposal site, shall be transferred to the United States or the State in which such land is located, at the option of such State. In view of the fact that physical isolation must be the primary means of long term control, and Government land ownership is a desirable supplementary measure, ownership of certain severable subsurface interests (for example, mineral rights) may be determined to be unnecessary to protect the public health and safety and the environment. In any case, however, the applicant/operator must demonstrate a serious effort to obtain such subsurface rights, and must, in the event that certain rights cannot be obtained, provide notification in local public land records of the fact that the land is being used for the disposal of radioactive material and is subject to either an NRC general or specific license prohibiting the disruption and disturbance of the tailings. In some rare cases, such as may occur with deep burial where no ongoing site surveillance will be required, surface land ownership transfer requirements may be waived. For licenses issued before November 8, 1981, the Commission may take into account the status of the ownership of such land, and interests therein, and the ability of a licensee to transfer title and custody thereof to the United States or a State.

D. If the Commission subsequent to title transfer determines that use of the surface or subsurface estates, or both, of the land transferred to the United States or to a State will not endanger the public health, safety, welfare, or environment, the Commission may permit the use of the surface or subsurface estates, or both, of such land in a manner consistent with the provisions provided in these criteria. If the Commission permits such use of such land, it will provide the person who transferred such land with the right of first refusal with respect to such use of such land.

E. Material and land transferred to the United States or a State in accordance with

this Criterion shall be transferred without cost to the United States or a State other than administrative and legal costs incurred in carrying out such transfer.

F. The provisions of this Part respecting transfer of title and custody to land and tailings and wastes shall not apply in the case of lands held in trust by the United States for any Indian tribe or lands owned by such Indian tribe subject to a restriction against alienation imposed by the United States. In the case of such lands which are used for the disposal of byproduct material, as defined in this Part, the licensee shall enter into arrangements with the Commission as may be appropriate to assure the long term surveillance of such lands by the United States.

### IV. Long-Term Site Surveillance

Criterion 12—The final disposition of tailings or wastes at milling sites should be such that ongoing active maintenance is not necessary to preserve isolation. As a minimum, annual site inspections shall be conducted by the government agency retaining ultimate custody of the site where tailings, or wastes are stored to confirm the integrity of the stabilized tailings or waste systems and to determine the need, if any, for maintenance and/or monitoring. Results of the inspection shall be reported to the Commission within 60 days following each inspection. The Commission may require more frequent site inspections if, on the basis of a site-specific evaluation, such a need appears necessary due to the features of a particular tailings or waste disposal system.



UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

**PART  
40**

**DOMESTIC LICENSING OF SOURCE MATERIAL**

**PROPOSED RULE MAKING**

43 FR 10370  
Published 3/13/78  
Comment period expires 5/15/78  
(extended to 7/15/78)

*Decommissioning Criteria for Nuclear  
Facilities; Advance Notice of Proposed  
Rulemaking*

See Part 50 Proposed Rule Making.

43 FR 19053  
Published 5/3/78  
Comment period extended to 7/15/78

*Decommissioning Criteria for Nuclear  
Facilities*

See Part 50 Proposed Rule Making.

43 FR 22365  
Published 5/25/78  
Comment period expires 7/24/78  
(extended to 12/21/78)

*Safeguards on Nuclear Material—Implemen-  
tation of US/IAEA Agreement*

See Part 75 Proposed Rule Making.

43 FR 54255  
Published 11/21/78  
Comment period extended to 12/21/78

*Safeguards on Nuclear Material—Implementation  
of US/IAEA Agreement*

See Part 75 Proposed Rule Making.

44 FR 41468  
Published 7/17/79  
Comment period expires 8/31/79

*Safeguards on Nuclear Material; Implementation  
of US/IAEA Agreement*

See Part 75 Proposed Rule Making.

44 FR 50015  
Published 8/24/79  
Comment period expires 10/24/79

*Criteria Relating to Uranium Mill  
Tailings and Construction of Major  
Plants*

See Part 30 Proposed Rule Making.

44 FR 70408  
Published 12/6/79  
Comment period expires 3/3/80

*Disposal of High-Level Radioactive Wastes  
in Geologic Repositories; Proposed Licensing  
Procedures.*

See Part 60 Proposed Rule Making.

45 FR 13739  
Published 3/3/80  
Comment period expires May 2, 1980

*Environmental Protection Regulations  
for Domestic Licensing and Related  
Regulatory Functions and Related  
Conforming Amendments*

See Part 51 Proposed Rule Making.

45 FR 14589  
Published 3/6/80  
Comment period expires 3/6/90

**10 CFR Part 40**

**Licensing of Source Material; Deletion  
of Source Material Medicinals From  
the General License for Small  
Quantities of Source Material**

**AGENCY:** U.S. Nuclear Regulatory  
Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The Nuclear Regulatory  
Commission is considering amending its  
licensing regulations by deleting the  
provision which authorizes the use of  
source material\* medicinals by  
physicians, pharmacists and other  
persons receiving the source material in  
the form of medicinals or drugs. These  
medicinals are now recognized as  
carcinogenic. This proposed action  
would prohibit any internal or external  
administration of source material, or the  
radiation therefrom, to human beings,  
except where authorized by an NRC  
specific license.

**DATES:** Comment period expires May 6,  
1980.

**ADDRESSES:** Interested persons are  
invited to submit written comments and  
suggestions on the proposed amendment  
and/or the supporting value/impact

\*Source material, as defined in § 40.4(h) of 10 CFR  
Part 40, means, among other things, uranium or  
thorium, or any combination thereof, in any physical  
or chemical form.

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analysis to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Single copies of the value/impact analysis may be obtained on request from the Office of Standards Development. Copies of the value/impact analysis and of comments received by the Commission may be examined at the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C.

### FOR FURTHER INFORMATION CONTACT:

Deborah A. Bozik, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Telephone 301-443-5860).

### SUPPLEMENTARY INFORMATION:

Thorotrast, authorized for use by the general license in § 40.22 and used as an X-ray contrast agent, has been the only source material utilized as a medicinal; no other thorium or uranium compounds have been used as source material medicinals. Thorotrast is the colloidal dioxide of thorium-232 which is an alpha-emitting radionuclide. As the radiobiological hazards of these radionuclides became apparent, the carcinogenic potential of Thorotrast was evident, and, in 1965, the production of Thorotrast was stopped. Improvements in X-ray machines and imaging techniques have resulted in Thorotrast being replaced with nonradioactive contrast agents. There is a need for NRC to remove the authorization to use Thorotrast from its regulations.

The Food and Drug Administration terminated the approved New Drug Application (NDA) for Thorotrast on June 13, 1977. NRC and FDA both strive for consistency in their regulations. The proposed action would result in a definite value to NRC's regulatory process because it would be consistent with the NRC policy that no use of radiation should be permitted without indication of benefit.

Because Thorotrast is no longer manufactured, nor recognized as useful by the medical community, and since nonradioactive agents have replaced it in contrast studies, there would be no impact on patients.

The proposed rule would amend the general license provisions in § 40.22 of 10 CFR Part 40 by rewriting paragraph (a) to delete the authorization for the following persons to use and transfer small quantities of source material:

- (1) Pharmacists using source material solely for compounding medicinals;
- (2) Physicians using source material for medicinal purposes;
- (3) Persons receiving possession of source material from pharmacists and physicians in the form of medicinals or

drugs.

Commercial and industrial firms; research, educational and medical institutions; and Federal, State and local government agencies would still retain their authorization under this general license to use small quantities of source material for research, development, educational, commercial or operational purposes.

However, a new paragraph would be added to the general license in § 40.22 of 10 CFR Part 40 which would prohibit licensees from administering source material, or the radiation therefrom, either internally or externally, to human beings, except where authorized by an NRC specific license.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of title 5 of the United States Code, notice is hereby given that the adoption of the following amendment to 10 CFR Part 40 is contemplated.

1. Section 40.22 of 10 CFR Part 40 is amended by revising paragraph (a), and by adding a new paragraph, (c), to read as follows:

### § 40.22 Small quantities of source material.

(a) A general license is hereby issued authorizing commercial and industrial firms, research, educational and medical institutions and Federal, State and local government agencies to use and transfer not more than fifteen (15) pounds of source material at any one time for research, development, educational, commercial or operational purposes. A person authorized to use or transfer source material, pursuant to this general license, may not receive more than a total of 150 pounds of source material in any one calendar year.

(c) Persons who receive, possess, use or transfer source material pursuant to the general license in paragraph (a) of this section are prohibited from administering source material, or the radiation therefrom, either externally or internally, to human beings except as may be authorized by NRC in a specific license.

45FR15184

Published 3/10/80

Comment period expires 5/9/80

*Protection of Employees  
Who Provide Information*

See Part 19

Proposed Rule Making

## PART 50 • DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

completion of one Type A test and the initiation of the containment inspection for the subsequent Type A test, repairs or adjustments shall be made to components whose leakage exceeds that specified in the technical specification as soon as practical after identification. If during a Type A test, including the supplemental test specified in III.A.3.(b), potentially excessive leakage paths are identified which will interfere with satisfactory completion of the test, or which result in the Type A test not meeting the acceptance criteria III.A.4.(b) or III.A.5.(b), the Type A test shall be terminated and the leakage through such paths shall be measured using local leakage testing methods. Repairs and/or adjustments to equipment shall be made and a Type A test performed. The corrective action taken and the change in leakage rate determined from the tests and overall integrated leakage determined from the local leak and Type A tests shall be included in the report submitted to the Commission as specified in V.B.

(b) Closure of containment isolation valves for the Type A test shall be accomplished by normal operation and without any preliminary exercising or adjustments (e.g., no tightening of valve after closure by valve motor). Repairs of maloperating or leaking valves shall be made as necessary. Information on any valve closure malfunction or valve leakage that requires corrective action before the test, shall be included in the report submitted to the Commission as specified in V.B.

(c) The containment test conditions shall stabilize for a period of about 4 hours prior to the start of a leakage rate test.

(d) Those portions of the fluid systems that are part of the reactor coolant pressure boundary and are open directly to the containment atmosphere under post-accident conditions and become an extension of the boundary of the containment shall be opened or vented to the containment atmosphere prior to and during the test. Portions of closed systems inside containment that penetrate containment and rupture as a result of a loss of coolant accident shall be vented to the containment atmosphere. All vented systems shall be drained of water or other fluids to the extent necessary to assure exposure of the system containment isolation valves to containment air test pressure and to assure they will be subjected to the post-accident differential pressure. Systems that are required to maintain the plant in a safe condition during the test shall be operable in their normal mode, and need not be vented. Systems that are normally filled with water and operating under post-accident conditions, such as the containment heat removal system, need not be vented. However, the containment isolation valves in the systems defined in III.A.1.(d) shall be tested in accordance with III.C. The measured leakage rate from these tests shall be reported to the Commission.

2. *Conduct of tests.* Preoperational leakage rate tests at either reduced or at peak pressure, shall be conducted at the intervals specified in III.D.

3. *Test methods.* (a) All Type A tests shall be conducted in accordance with the provisions of the American National Standard N45.4-1972, *Leakage Rate Testing of Containment Structures for Nuclear Reactors*, March 16 1972.<sup>1</sup> The method chosen for the

initial test shall normally be used for the periodic tests.

(b) The accuracy of any Type A test shall be verified by a supplemental test. An acceptable method is described in Appendix C of ANSI N45.4-1972. The supplemental test method selected shall be conducted for sufficient duration to establish accurately the change in leakage rate between the Type A and supplemental test. Results from this supplemental test are acceptable provided the difference between the supplemental test data and the Type A test data is within 0.25 La (or 0.25 Lt). If results are not within 0.25 La (or 0.25 Lt), the reason shall be determined, corrective action taken, and a successful supplemental test performed.

(c) Test leakage rates shall be calculated using absolute values corrected for instrument error.

4. *Preoperational leakage rate tests.* (a) *Test pressure.* (1) *Reduced pressure tests.* (i) An initial test shall be performed at a pressure Pt, not less than 0.50 Pa to measure a leakage rate Ltm.

(ii) A second test shall be performed at pressure Pa to measure a leakage rate Lam.

(iii) The leakage characteristics yielded by measurements Ltm and Lam shall establish the maximum allowable test leakage rate Lt not more than La (Ltm/Lam). In the event Ltm/Lam is greater than 0.7, Lt shall be specified as equal to La (Pt/Pa)<sup>1/2</sup>.

(2) *Peak pressure tests.* A test shall be performed at pressure Pa to measure the leakage rate Lam.

(b) *Acceptance criteria.* (1) *Reduced pressure tests.* The leakage rate Ltm shall be less than 0.75 Lt.

(2) *Peak pressure tests.* The leakage rate Lam shall be less than 0.75 La and not greater than Lt.

5. *Periodic leakage rate tests.* (a) *Test pressure.* (1) *Reduced pressure tests* shall be conducted at Pt.

(2) *Peak pressure tests* shall be conducted at Pa.

(b) *Acceptance criteria.* (1) *Reduced pressure tests.* The leakage rate Ltm shall be less than 0.75 Lt. If local leakage measurements are taken to effect repairs in order to meet the acceptance criteria, these measurements shall be taken at a test pressure Pt.

(2) *Peak pressure tests.* The leakage rate Lam shall be less than 0.75 La. If local leakage measurements are taken to effect repairs in order to meet the acceptance criteria, these measurements shall be taken at a test pressure Pa.

6. *Additional Requirements.* (a) If any periodic Type A test fails to meet the applicable acceptance criteria in III.A.5.(b), the test schedule applicable to subsequent Type A tests will be reviewed and approved by the Commission.

(b) If two consecutive periodic Type A tests fail to meet the applicable acceptance criteria in III.A.5.(b), notwithstanding the periodic retest schedule of III.D., a Type A test shall be performed at each plant shutdown for refueling or approximately every 18 months, whichever occurs first, until two consecutive Type A tests meet the acceptance criteria in III.A.5.(b), after which time the retest schedule specified in III.D. may be resumed.

B. *Type B tests.*

1. *Test methods.* Acceptable means of performing a preoperational and periodic Type B tests include:

(a) Examination by halide leak-detection method (or by other equivalent test methods such as mass spectrometer) of a test chamber, pressurized with air, nitrogen, or pneumatic fluid specified in the technical specifications or associated bases and constructed as part of individual containment penetrations.

(b) Measurement of the rate of pressure loss of the test chamber of the containment penetration pressurized with air, nitrogen, or pneumatic fluid specified in the technical specifications or associated bases.

(c) Leakage surveillance by means of a permanently installed system with provisions for continuous or intermittent pressurization of individual or groups of containment penetrations and measurement of rate of pressure loss of air, nitrogen, or pneumatic fluid specified in the technical specification or associated bases through the leak paths.

2. *Test Pressure.* All preoperational and periodic Type B tests shall be performed by local pneumatic pressurization of the containment penetrations, either individually or in groups, at a pressure not less than Pa.

3. *Acceptance criteria.* (See also Type C tests.) (a) The combined leakage rate of all penetrations and valves subject to Type B and C tests shall be less than 0.60 La, with the exception of the valves specified in III.C.3.

(b) Leakage measurements obtained through component leakage surveillance systems (e.g., continuous pressurization of individual containment components) that maintains a pressure not less than Pa at individual test chambers of containment penetrations during normal reactor operation, are acceptable in lieu of Type B tests.

C. *Type C tests.*

1. *Test method.* Type C tests shall be performed by local pressurization. The pressure shall be applied in the same direction as that when the value would be required to perform its safety function, unless it can be determined that the results from the tests for a pressure applied in a different direction will provide equivalent or more conservative results. The test methods in III.B.1 may be substituted where appropriate. Each valve to be tested shall be closed by normal operation and without any preliminary exercising or adjustments (e.g., no tightening of valve after closure by valve motor).

2. *Test pressure.* (a) Valves, unless pressurized with fluid (e.g., water, nitrogen) from a seal system, shall be pressurized with air or nitrogen at a pressure of Pa.

(b) Valves, which are sealed with fluid from a seal system shall be pressurized with that fluid to a pressure not less than 1.10 Pa.

3. *Acceptance criterion.* The combined leakage rate for all penetrations and valves subject to Type B and C tests shall be less than 0.60 La. Leakage from containment isolation valves that are sealed with fluid from a seal system may be excluded when determining the combined leakage rate: *Provided, That:*

(a) Such valves have been demonstrated to have fluid leakage rates that do not exceed those specified in the technical specifications or associated bases, and

(b) The installed isolation valve seal-water system fluid inventory is sufficient to assure the sealing function for at least 30 days at a pressure of 1.10 Pa.

D. *Periodic retest schedule.*—1. *Type A test.* (a) After the preoperational leakage rate tests, a set of three Type A tests shall be performed, at approximately equal intervals during each 10-year service period. The third test of each set shall be conducted when the plant is shutdown for the 10-year plant in-service inspections.<sup>2</sup>

<sup>1</sup> ANSI N45.4-1972 *Leakage Rate Testing of Containment Structures for Nuclear Reactors* (dated Mar. 16, 1972). Copies may be obtained from the American Nuclear Society, 244 East Ogden Avenue, Hinsdale, IL 60521. A copy is available for inspection at the Commission's Public Document Room, 1717 H Street NW, Washington, DC. The incorporation by reference was approved by the Director of the Federal Register on October 30, 1972.

<sup>2</sup> Amended 38 FR 5997.

<sup>3</sup> Such in-service inspections are required by § 50.55a.

## PART 50 • DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

### 2. Type B Tests.

(a) Type B tests, except tests for air locks, shall be performed during reactor shutdown for refueling, or other convenient intervals, but in no case at intervals greater than 2 years. If opened following a Type A or B test, containment penetrations subject to Type B testing shall be Type B tested prior to returning the reactor to an operating mode requiring containment integrity. For primary reactor containment penetrations employing a continuous leakage monitoring system, Type B tests, except for tests of air locks, may, notwithstanding the test schedule specified under III.D.1., be performed every other reactor shutdown for refueling but in no case at intervals greater than 3 years.

(b)(i) Air locks shall be tested prior to initial fuel loading and at 6-month intervals thereafter at an internal pressure not less than  $P_a$ .

(ii) Air locks opened during periods when containment integrity is not required by the plant's Technical Specifications shall be tested at the end of such periods at not less than  $P_a$ .

(iii) Air locks opened during periods when containment integrity is required by the plant's Technical Specifications shall be tested within 3 days after being opened. For air lock doors opened more frequently than once every 3 days, the air lock shall be tested at least once every 3 days during the period of frequent openings. For air lock doors having testable seals, testing the seals fulfills the 3-day test requirements. In the event that the testing for this 3-day interval cannot be at  $P_a$ , the test pressure shall be as stated in the Technical Specifications. Air lock door seal testing shall not be substituted for the 6-month test of the entire air lock at not less than  $P_a$ .

(iv) The acceptance criteria for air lock testing shall be stated in the Technical Specifications.

3. Type C tests. Type C tests shall be performed during each reactor shutdown for refueling but in no case at intervals greater than 2 years.

#### IV. SPECIAL TESTING REQUIREMENTS

A. Containment modification. Any major modification, replacement of a component which is part of the primary reactor containment boundary, or resealing a seal-welded door, performed after the preoperational leakage rate test shall be followed by either a Type A, Type B, or Type C test, as applicable for the area affected by the modification. The measured leakage from this test shall be included in the report to the Com-

mission, required by V.A. The acceptance criteria of III.A.5.(b), III.B.3., or III.C.3., as appropriate, shall be met. Minor modifications, replacements, or resealing of seal-welded doors, performed directly prior to the conduct of a scheduled Type A test do not require a separate test.

B. Multiple leakage barrier or subatmospheric containments. The primary reactor containment barrier of a multiple barrier or subatmospheric containment shall be subjected to Type A tests to verify that its leakage rate meets the requirements of this appendix. Other structures of multiple barrier or subatmospheric containments (e.g., secondary containments for boiling water reactors and shield buildings for pressurized water reactors that enclose the entire primary reactor containment or portions thereof) shall be subject to individual tests in accordance with the procedures specified in the technical specifications, or associated bases.

#### V. INSPECTION AND REPORTING OF TESTS\*

A. Containment inspection. A general inspection of the accessible interior and exterior surfaces of the containment structures and components shall be performed prior to any Type A test to uncover any evidence of structural deterioration which may affect either the containment structural integrity or leak-tightness. If there is evidence of structural deterioration, Type A tests shall not be performed until corrective action is taken in accordance with repair procedures, nondestructive examinations, and tests as specified in the applicable code specified in § 50.55a at the commencement of repair work. Such structural deterioration and corrective actions taken shall be reported as part of the test report, submitted in accordance with V.B.

B. Report of test results. 1. The preoperational and periodic tests shall be the subject of a summary technical report submitted to the Director of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Wash. DC 20555,† approximately 3 months after the conduct of each test. The report shall be titled "Reactor Containment Building Integrated Leakage Rate Test."

2. The report on the preoperational test shall include a schematic arrangement of the leakage rate measurement system, the instrumentation used, the supplemental test method, and the test program selected as applicable to the preoperational test, and all subsequent periodic tests. The report shall contain an analysis and interpretation of the leakage rate test data for the Type A test results to the extent necessary to demonstrate the acceptability of the containment's leakage rate in meeting the acceptance criteria.

3. For each periodic test, leakage test results from Type A, B, and C tests shall be reported. The report shall contain an analysis and interpretation of the Type A test results and a summary analysis of periodic Type B and Type C tests that were performed since the last Type A test. Leakage test results from Type A, B, and C tests that failed to meet the acceptance criteria of III.A.5.(b), III.B.3., and III.C.3., respectively, shall be reported in a separate accompanying summary report that includes an analysis and interpretation of the test data, the least-squares fit analysis of the test data, the instrumentation error analysis, and the structural conditions of the containment or components, if any, which contributed to the failure in meeting the acceptance criteria. Results and analyses of the supplemental verification test employed to demonstrate the validity of the leakage rate test measurements shall also be included.

\* Amended 38 FR 5997.

† Amended 41 FR 16445.

#### APPENDIX K—ECCS EVALUATION MODELS

##### I. Required and Acceptable Features of Evaluation Models.

##### II. Required Documentation.

##### 1. REQUIRED AND ACCEPTABLE FEATURES OF THE EVALUATION MODELS

A. Sources of heat during the LOCA. For the heat sources listed in paragraphs 1 to 4 below it shall be assumed that the reactor has been operating continuously at a power level at least 1.02 times the licensed power level (to allow for such uncertainties as instrumentation error), with the maximum peaking factor allowed by the technical specifications. A range of power distribution shapes and peaking factors representing power distributions that may occur over the core lifetime shall be studied and the one selected should be that which results in the most severe calculated consequences, for the spectrum of postulated breaks and single failures analyzed.

1. The Initial Stored Energy in the Fuel. The steady-state temperature distribution and stored energy in the fuel before the hypothetical accident shall be calculated for the burn-up that yields the highest calculated cladding temperature (or, optionally, the highest calculated stored energy.) To accomplish this, the thermal conductivity of the UO<sub>2</sub> shall be evaluated as a function of burn-up and temperature, taking into consideration differences in initial density, and the thermal conductance of the gap between the UO<sub>2</sub> and the cladding shall be evaluated as a function of the burn-up, taking into consideration fuel densification and expansion, the composition and pressure of the gases within the fuel rod, the initial cold gap dimension with its tolerances, and cladding creep.

2. Fission Heat. Fission heat shall be calculated using reactivity and reactor kinetics. Shutdown reactivities resulting from temperatures and voids shall be given their minimum plausible values, including allowance for uncertainties, for the range of power distribution shapes and peaking factors indicated to be studied above. Rod trip and insertion may be assumed if they are calculated to occur.

3. Decay of Actinides. The heat from the radioactive decay of actinides, including neptunium and plutonium generated during operation, as well as isotopes of uranium, shall be calculated in accordance with fuel cycle calculations and known radioactive properties. The actinide decay heat chosen shall be that appropriate for the time in the fuel cycle that yields the highest calculated fuel temperature during the LOCA.

4. Fission Product Decay. The heat generation rates from radioactive decay of fission products shall be assumed to be equal to 1.2 times the values for infinite operating time in the ANS Standard (Proposed American Nuclear Society Standards—"Decay Energy Release Rates Following Shutdown of Uranium-Fueled Thermal Reactors". Approved by Subcommittee ANS-5, ANS Standards Committee, October 1971). The fraction of the locally generated gamma energy that is deposited in the fuel (including the cladding) may be different from 1.0; the value used shall be justified by a suitable calculation.

5. Metal-Water Reaction Rate. The rate of energy release, hydrogen generation, and cladding oxidation from the metal/water reaction shall be calculated using the Baker-Just equation (Baker, L., Just, L.C., "Studies of Metal Water Reactions at High Temperatures, III. Experimental and Theoretical Studies of the Zirconium-Water Reaction," ANL-6548, page 7, May 1962). The reaction shall be assumed not to be steam limited. For rods whose cladding is calculated to rupture during the LOCA, the inside of the cladding shall also be assumed to react after the rupture. The calculation of the reaction rate on



## PART 50 • PROPOSED RULE MAKING

41 FR 56204

Published 12/27/76

Comment Period extended to 1/26/77

### [10 CFR Part 50]

#### LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

##### Periodic Updating of Final Safety Analysis Reports; Correction and Extension of Comment Period

On November 8, 1976, the Nuclear Regulatory Commission proposed for comment (41 FR 49123) amendments to its regulation, "Licensing of Production and Utilization Facilities," 10 CFR Part 50, which would require each applicant for or holder of a power reactor operating license which would be or was issued after January 1, 1963 to periodically submit to the Commission revised pages for its Final Safety Analysis Report (FSAR) that indicate changes made in the facility or the procedures for its operation and any analyses that are affected by these changes.

As indicated in the statement of considerations, the intent of the Commission was to apply the proposed rule to all power reactors licensed after January 1, 1963. However, the proposed rule was inadvertently limited in its applicability to those power reactors licensed pursuant to the provisions of § 50.22 of 10 CFR Part 50 when the actual intent was to include all power reactors even those licensed pursuant to § 50.21 as well.

Accordingly, in FR Doc. 76-32614, published on Monday, November 8, 1976, center column, page 49123, the third line of § 50.71(e) is corrected to read as follows: "§ 50.21 or § 50.22, each applicant for or holder of".

In view of the fact that those power reactor licensees who received their operating licenses under the provisions of § 50.21 may not have realized that they would be subject to the proposed rule, it has been decided to extend the comment period to provide adequate time for comment. Accordingly, the comment period is hereby extended to January 26, 1977.

42 FR 14880

Published 3/17/77

Comment Period expires 5/16/77

*Special Nuclear Material; Authority for Access to or Control*

See Part 11 Proposed Rule Making.

42 FR 17134

Published 3/31/77

Comment Period expires 5/2/77

Partial effective rule published 7/18/77

### [10 CFR Part 50]

#### LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

##### Codes and Standards for Nuclear Power Plants

The Nuclear Regulatory Commission has under consideration amendments to its regulation, 10 CFR Part 50, "Licensing of Production and Utilization Facilities," which would incorporate by reference new addenda to specified published national codes and would clarify provisions in § 50.55a and Appendix G to Part 50.

On December 6, 1976, the Nuclear Regulatory Commission published in the FEDERAL REGISTER (41 FR 53333) an amendment to § 50.55a which provides that the editions of the referenced Codes and Addenda whose requirements must be met include those Addenda through the Summer 1975 Addenda.

Additional Addenda of the referenced ASME Boiler and Pressure Vessel Code have been issued through the Winter 1976 Addenda. The Commission proposes to amend § 50.55a to incorporate by reference the Addenda through the Winter 1976 Addenda to Section III, Division 1, "Rules for the Construction of Nuclear Power Plant Components," of the ASME Boiler and Pressure Vessel Code. The Winter 1975, Summer 1976, and Winter 1976 Addenda to Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the ASME Code are still being evaluated and are expected to be referenced with modifications in a subsequent amendment to the regulations. Until these addenda are incorporated by reference in the regulations, the Summer 1975 Addenda will continue to be the latest Addenda in effect in the regulations for Section XI of the ASME Code. Comments on Section XI of the Code will be considered after the Commission issues the proposed rule inviting comments on the subject.

Changes of a clarifying nature, also are included in the proposed amendments to § 50.55a. The changes to footnote 4 and additions to paragraphs (g) (3) and (g) (4) are intended to make clear that references to codes in § 50.55a apply only to those editions of the codes and Addenda which have been reviewed by the Commission and have been incorporated by reference in paragraph (b) of that section.

A proposed amendment to Appendix G to Part 50 is included to clarify the requirements for the minimum metal temperature that must be maintained during reactor startup to assure an adequate margin against fracture of the closure flanges and adjacent head and shell regions that are stressed by the closure bolting. This amendment would not change present requirements as given in the 1974 Edition of Section III of the ASME Boiler and Pressure Vessel Code and incorporated by reference in Appendix G to 10 CFR Part 50. This amendment is necessary to retain the margin of safety against brittle fracture presently required because the Summer 1976 Addenda which would be incorporated by reference include a change in paragraph G 2222(c) of Appendix G to Section III of the ASME Boiler and Pressure Vessel Code which would permit a decrease in the required margin of safety.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorgani-

## PART 50 • PROPOSED RULE MAKING

zation Act of 1974, as amended, and section 553 of Title 5 of the United States Code, notice is hereby given that adoption of the following amendments of 10 CFR Part 50 is contemplated. All interested persons who wish to submit written comments or suggestions in connection with the proposed amendments should send them to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch by May 2, 1977. Copies of comments received may be examined in the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C.

1. Section 50.55a is amended by deleting the phrases "in effect" and "in effect" wherever they appear except in paragraph (h) and substituting therefor the phrase "in effect"; by deleting the phrases "become effective" and "became effective" wherever they appear except in paragraph (g)(4)(v) and in paragraph (h) and substituting therefor the phrases "become effective" and "became effective", respectively; by deleting the language "set forth in Section XI of editions of the ASME Boiler and Pressure Vessel Code and Addenda,"<sup>1</sup> applied to" in paragraphs (g)(3)(i) through (g)(3)(iv) and substituting therefor the language "set forth in editions of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda,"<sup>1</sup> in effect<sup>1</sup> on the date when the editions of Section III of this Code and Addenda apply to"; by deleting the phrase "and are incorporated by reference in paragraph (b) of this section," in the prefatory language of paragraph (g)(4); by deleting the phrase "no more than" in paragraph (g)(4)(i) through (g)(4)(iv) and adding the phrase "or may comply with later editions and addenda that become effective" at the end of these paragraphs; by revising paragraphs (b), and footnote 4 to read as follows:

### § 50.55a Codes and standards.

Each operating license for a boiling or pressurized water-cooled nuclear power facility shall be subject to the conditions in paragraph (g) of this section and each construction permit for a utilization facility shall be subject to the following conditions in addition to those specified in § 50.55:

(b) As used in this section, references<sup>1</sup> to editions of Criteria, Codes and Standards include only those editions through 1974; references<sup>1</sup> to Addenda include only those Addenda through the Summer 1975 Addenda, except references<sup>1</sup> to Addenda of Section III, Division 1, of the ASME Boiler and Pressure Vessel Code include those Addenda through the Winter 1976 Addenda.

<sup>1</sup> These incorporation by reference provisions were approved by the Director of the FEDERAL REGISTER on March 17, 1972 and May 4, 1973.

<sup>1</sup> For purposes of paragraphs (a) through (g) and paragraphs (i) and (j) of this section, ASME code editions and addenda are considered to be "in effect" or "effective" after they are incorporated by reference in paragraph (b) of this section.

2. In 10 CFR Part 50, Appendix G is amended by adding a new paragraph IV.A.2.e. to read as follows:

#### IV. FRACTURE TOUGHNESS REQUIREMENTS

##### A. . . .

##### 1. . . .

2. For vessels, exclusive of bolting or other fasteners:

e. When the flanges and adjacent head and shell regions of vessels are stressed by the full intended bolt preload and by pressure not exceeding 20% of the preoperational system hydrostatic test pressure, minimal metal temperature in the stressed region should be at least 60° F. above the RT<sub>NDT</sub> temperature for the material in the stressed region, considering its initial RT<sub>NDT</sub> temperature, plus the effect of irradiation at the stressed region, if any.

43 FR 10370

Published 3/13/78

Comment period expires 5/15/78  
(extended to 7/15/78)

[10 CFR Parts 30, 40, 50, and 70]

### DECOMMISSIONING CRITERIA FOR NUCLEAR FACILITIES

#### Advance Notice of Proposed Rulemaking

AGENCY: U.S. Nuclear Regulatory Commission.

ACTION: Advance Notice of Proposed Rulemaking.

SUMMARY: The U.S. Nuclear Regulatory Commission has underway extensive studies intended to provide a data base for developing decommissioning criteria for nuclear facilities. The Commission is considering amending its regulations to provide more specific guidance on decommissioning criteria for production and utilization facility licensees and byproduct, source, and special nuclear material licensees. This notice is to invite advice and recommendations on several questions concerning decommissioning nuclear facilities.

DATES: Comment period expires May 15, 1978.

ADDRESSES: Interested persons are invited to submit written comments and suggestions to the Secretary of

## PART 50 • PROPOSED RULE MAKING

45 FR 54708

Published 8/15/80

Comment period expires 9/29/80

### 10 CFR Part 50

#### Functional Criteria for Emergency Response Facilities

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Request for comments.

**SUMMARY:** The NRC staff is developing guidance for an acceptable method for providing the emergency response facilities needed to implement the plans for coping with emergencies that are required by § 50.34 and Appendix E of 10 CFR Part 50. Development of this guidance is motivated by the experience from the accident at the Three Mile Island nuclear power plant and the recommendations resulting from the investigations of the accident. The proposed functional criteria of the four elements of the emergency response facilities, the Safety Parameter Display (SPDS), the Technical Support Center (TSC), the Emergency Operations Facility (EOF), and the Nuclear Data Link (NDL) are contained in the document NUREG-0696, "Functional Criteria for Emergency Response Facilities." The staff is now soliciting public comment on these functional criteria and the schedule for implementation discussed below.

**DATES:** Comment period expires: September 29, 1980.

**ADDRESSES:** Written comments or suggestions should be sent to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments received may be examined at the Commission's Public Document Room at 1717 H Street, NW, Washington, D.C. A copy of the functional criteria (NUREG-0696, "Functional Criteria for Emergency Response Facilities") is also available for inspection at the same address. Requests for single copies at no cost should be made in writing to the Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Phone 301-492-9530).

**FOR FURTHER INFORMATION CONTACT:** Mr. Warren Minners, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Phone 301-492-7581).

**SUPPLEMENTARY INFORMATION:** The investigations of the accident at the Three Mile Island Unit 2 nuclear power plant identified the need for extensive improvements in emergency preparedness at nuclear power plants.

Areas identified as deficient and in need of improvement included the organization of personnel to control, manage, assess, support and coordinate activities both on and off the site during emergency situations; the facilities for these personnel; the availability of information needed to assess and manage the reactor, other sources of radioactivity and the actual and potential radiological consequences; and the provisions for disseminating accurate and timely information, warnings and instructions to local and state agencies, the affected population and the public in general. An acceptable method of providing emergency response facilities is proposed in NUREG-0696, "Functional Criteria for Emergency Response Facilities." These proposed facilities include a Technical Support Center (TSC) and an Emergency Operations Facility (EOF) which are dedicated areas for the management, assessment, support and coordination of accident situations. Also included with these facilities is a Safety Parameter Display which monitors the safety status of the plant and the Nuclear Data Link which transmits critical plant variables to the NRC headquarters.

#### Background

The current requirements for emergency preparedness are contained in Appendix E to 10 CFR Part 50, "Emergency Plans for Production and Utilization Facilities," which was published in December 1970 and amended in January 1973. In conjunction with this rule, the Commission developed a document entitled "Guide to the Preparation of Emergency Plans for Production and Utilization Facilities," to help applicants establish adequate emergency plans. More complete guidance for an acceptable method for complying with this regulation, including general guidance for emergency facilities, is contained in Revision 1 of Regulatory Guide 1.101 "Emergency Planning for Nuclear Power Plants," published in March 1977.

As part of the responsibilities of the NRC and FEMA under the Atomic Energy Act, as amended, and the President's statement of December 7, 1979, the staffs of the two agencies have jointly prepared NUREG-0654 (FEMA-REP-1) "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" which was published in January 1980 for interim use and comment. The purpose of NUREG-0654 is to provide a common reference and interim guidance for state and local governments, nuclear facility operators, the NRC, FEMA, and other federal agencies in the development and review of state and local government and licensee emergency plans and

preparedness, including emergency support facilities. The NRC also published (44 FR 75167) a proposed revision to its emergency planning regulations including Appendix E to 10 CFR Part 50. The proposed revision to the regulations includes a specific requirement for emergency support facilities. On June 18, 1980, the Commission issued a Statement of Policy (45 FR 41738) as further guidance to Boards and the staff that current operating license applications should be measured against the regulations as augmented by the requirements, including requirements for emergency support facilities, listed in NUREG-0694 "TMI-Related Requirements for New Operating Licensees."

#### Bases for the Functional Criteria

These proposed emergency facilities are needed because effective emergency response requires the establishment of dedicated areas for the management, assessment, support and coordination of potential or actual accident situations. To reduce congestion and confusion, the use of the control room should be limited to direct control of the plant. However, a nearby area designated as the Technical Support Center (TSC) is proposed to accommodate the technical personnel who support control room functions, evaluate and diagnose plant conditions and manage and coordinate other emergency response functions related to the plant. A second area, designated as the Emergency Operations Facility (EOF) is proposed to provide a planned, organized control focal point for the coordination of onsite and offsite activities. The EOF is to be located offsite and equipped to function as the center for the licensee's management, control and assessment of all activities related to an emergency having potential or actual environment consequences. A primary function of the EOF would be the analysis of plant effluent, meteorological conditions, offsite radiation releases and offsite dose projections.

In addition to these facilities, two associated functions are proposed. The first is directed to the ability of the reactor operators to readily monitor the safety status of the plant. The investigators of the TMI accident criticized the design of nuclear power plant control rooms and questioned the ability of operators to quickly and correctly interpret the multitude of alarms, indicators, and other information that are currently installed in control rooms. As an aid to the operators in monitoring the status of the plant during normal operation transients and accident a Safety Parameter Display System (SPDS) is proposed which would provide a continuous concise display of critical plant variables. This display would be provided in the TSC and the EOF.

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The second associated function is that of the NRC in accident situations. In addition to sending personnel to the site if an incident occurs, information is required by the NRC headquarters staff to monitor the licensee's actions, provide advice and be prepared, in extreme circumstances, to direct that some actions be taken. In order to accomplish this function, information concerning the status of the plant, radiation releases and meteorology would be required to be transmitted to the NRC. A proposed method of providing this information is through an acquisition, transmission, and display system designated as the Nuclear Data Link. The NDL would condition, process, and transmit a limited set of critical data from each plant for display at the NRC Operations Center in Bethesda, Maryland.

All of these elements of the emergency support facilities (the SPDS, TSC, EOF, and NDL) are interrelated and should be designed as an integrated system. The separate elements have some common and overlapping functions and all require information and data on the past or current status of the core, the plant, and the actual or potential release of radioactivity. The means of acquiring, processing, transmitting, and displaying this information and data is a major portion of the functional criteria that affects the design and integration of the individual elements. Therefore, the functional criteria for all elements have been provided in one document.

The staff also proposed the following implementation schedule. All licensees and applicants would submit to the NRC, by January 1, 1981, or prior to issuance of an operating license, whichever is later, a description of the design of the emergency response facilities; a schedule for the design, installation and construction of the facilities and proposed Technical Specifications for the Limiting Condition of Operation and Surveillance of these facilities. These emergency response facilities would be operational, but not necessarily meet the design criteria for associated instrumentation, by April 1, 1982, or prior to issuance of an operating license, whichever is later. The design criteria for associated instrumentation is specified in the proposed Revision 2 to Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident." The emergency response facilities would meet the design criteria of Revision 2 to Regulatory Guide 1.97 as specified for the guide. The currently proposed implementation schedule for Revision 2 to Regulatory Guide 1.97 is

that it will be applied to all plants issued operating licenses after June 1982 and to all other plants by June 1, 1983.

➤ 45 FR 65247

Published 10/2/80

Comment period expires 11/17/80

### 10 CFR Part 50

#### Proposed Licensing Requirements for Pending Construction Permit and Manufacturing License Applications

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** The Nuclear Regulatory Commission is considering requirements to take into account in the design of nuclear power plants which are the subject of pending construction permit (CP) and manufacturing license (ML) applications, lessons learned in connection with the Three Mile Island Unit 2 (TMI-2) accident. Comment is also sought on a proposed rule that would require CP and ML applicants to identify and provide the bases for all deviations from the acceptance criteria given in the applicable revision of the Standard Review Plan (NUREG 75/087). There are currently pending six active CP applications for eleven plants and one active ML application for eight floating nuclear plants. Staff review of these applications has been suspended since the TMI-2 accident on March 28, 1979 pending formulation of a licensing policy to appropriately reflect the lessons learned from the accident.

**DATES:** Comment period expires November 17, 1980.

**ADDRESSES:** Written comments should be sent to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments received may be examined at the Nuclear Regulatory Commission's Public Document Room at 1717 H Street, NW., Washington, D.C. A copy of NUREG-0718 "Proposed Licensing Requirements for Pending Applications for Construction Permits and Manufacturing License" is available for inspection at the same address. It is also available at all Nuclear Regulatory Commission Local Public Document Rooms.

Copies of NUREG-0718 are available upon request by persons who wish to comment, at no cost, from the Nuclear Regulatory Commission's GPO Sales Program, Division of Technical Information and Document Control,

Attention: Sales Manager, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Phone 301-492-9530).

**FOR FURTHER INFORMATION CONTACT:** Robert A. Purple, Deputy Director, Division of Licensing, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Phone 301-492-7672).

**SUPPLEMENTARY INFORMATION:** Based upon its extensive review and consideration of the issues arising as a result of the Three Mile Island accident, the Commission, on June 5, 1980 approved the TMI Action Plan, NUREG 0660. The Commission noted that the Action Plan presents a sequence of actions that will result in a gradually increasing improvement in safety as individual actions are completed and the initial immediate actions that were taken soon after the accident are replaced or supplemented by longer term improvements.

By Policy Statement dated June 18, 1980, the Commission identified (in NUREG 0694) the set of TMI-related requirements for new operating licenses that are necessary and sufficient for responding to the TMI-2 accident. The Commission further decided that current operating license applications should be measured against the regulations, as augmented by these requirements.

The Commission is now developing a position with respect to the set of necessary and sufficient TMI-related requirements that should be applied in the review of applications for construction permits and manufacturing licenses for nuclear power plants. In developing this position, three options have been considered:

1. Resume licensing using the pre-TMI CP requirements augmented by the applicable requirements identified in NUREG 0660.

2. Take no further action on the pending applications until the rulemaking actions described in the Action Plan have been completed.

3. Resume licensing using the pre-TMI CP requirements augmented by the applicable requirements identified in NUREG-0660 and require certain additional measures or commitments in selected areas (e.g., those that will be the subject of rulemaking).

Option 1 would minimize the review and construction impact, thereby minimizing delays in reaching regulatory decisions for the planned facilities. The principal disadvantage of Option 1 is that it fails to take advantage of the fact that, since construction has not started, it would be relatively easy to provide design flexibility to implement potential significant safety improvements.

Option 2 would maximize the safety improvements but would result in extensive delays. The Commission



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believes that the costs of such delays are not justified provided that design flexibility can be demonstrated.

The Commission believes that Option 3 is a suitable compromise between the extremes of Options 1 and 2. This option will ensure that approved action items in the Action Plan are applied to the new CPs and will provide for early consideration of added safety measures that can be incorporated into the design without the need for inordinately costly backfit. By establishing a clear statement of requirements with respect to the issues to be determined by rulemaking, a degree of stability is introduced into the CP review process thereby allowing prospective applicants to make better-informed decisions.

In its review of the Action Plan the Commission has identified four areas that it believes merit special attention. The following identifies these areas and describes the Commission's present position with respect to the requirements that should be met by CP and ML applicants.

1. *Siting*—The Commission has already established a transition policy for CP applicants. CP applicants would be asked to compare their sites with the recommendations of NUREG-0625, as modified by the NRC's Office of Policy Evaluation and Advisory Committee on Reactor Safeguards. At such time as the proposed rule on siting is issued for comment (schedule for October 1980), CP applications would be assessed against the criteria contained in the proposed rule and any needed additional requirements will be proposed by the staff.

2. *Degraded Core Rulemaking*—CP and ML applicants would describe the degree to which their designs conform to the proposed interim rule. Applicants would also provide reasonable assurance, to the extent practicable and taking into account the present state-of-the-art in the technology, that issuance of CPs and MLs will not foreclose or preclude modification of the facilities to accommodate potential requirements that may result from the rulemaking proceedings. These potential requirements include such features as filtered vented containment, molten core retention, and hydrogen control systems. Special attention would be given to those facility designs with small containment volumes, i.e., ice condenser and Mark III containment design. Prior to issuance of the CP or ML, applicants would be required to submit their evaluation of the additional features, both preventive and mitigative, they propose to include at their facilities that have the potential for significant risk reduction.

3. *Reliability Engineering*—CP and ML applicants would perform simplified system reliability analyses for the

following systems: subcriticality systems, emergency feedwater systems (PWRs), reactor core isolation cooling (BWRs), ECCS injection and recirculation systems, shutdown cooling systems, containment cooling and spray systems, safety features actuating systems, and auxiliary systems upon which these depend (alternating and direct current, compressed air, essential service or cooling systems, and heating, ventilating and air conditioning systems). These analyses would use event-tree and fault-tree logic techniques to identify design weaknesses and possible system modifications that would be made to improve the capability and reliability of the above systems under various transient and loss-of-coolant accident events. Particular emphasis would be given to determining potential failures that could result from human errors, common causes, single point vulnerabilities, and test and maintenance outages.

CP and ML applicants should provide sufficient information to describe the nature of the studies, how they are to be conducted, the completion dates, and the program to assure that the results of such studies are factored into the final designs.

4. *Emergency Preparedness*—CP applicants would submit, prior to the issuance of construction permits, a discussion of their preliminary plan for coping with emergencies addressing the amended rule (Appendix E to 10 CFR Part 50) as it applies to construction permit applications. Sufficient detail would be presented to provide reasonable assurance that the requirements will be implemented properly.

The remaining Action Plan items that the Commission has determined to be applicable to the pending CP and ML application are set forth in NUREG-0718 which also sets forth the required commitments or design information necessary to permit completion of the safety reviews. As Action Plan Decision Group C items are approved by the Commission, they would be added as requirements for CP and ML applicants.

All applicants for CPs and MLs for which staff SERs or SER TMI supplements are issued before January 1, 1982 would also be required to identify and provide the bases for all deviations from the acceptance criteria set forth in the May 1980 revision of the Standard Review Plan (SRP) (NUREG 75/087), and NUREG-0718 (as modified after public comment) prior to issuance of a Construction Permit or Manufacturing License. All applicants for CPs and MLs for which staff SERs or SER TMI supplements are issued after January 1, 1982 would be required to identify and provide the bases for all

deviations from the acceptance criteria set forth in the next revision of the Standard Review Plan (currently expected to be issued in April 1981) prior to issuance of a Construction Permit or Manufacturing License. The next revision of the Standard Review Plan will consist of the May 1980 revision of the SRP modified to reference all applicable safety and safeguards regulations and those Division 1 Regulatory Guides, staff positions, and other documents currently used by the staff to interpret the intent of these regulations, including requirements resulting from the TMI accident.

The information regarding identification and justification of deviations from the applicable revision of the SRP would be contained in those Safety Analysis Report sections that describe the systems, components, or structures in which the deviations exist. In addition, the applicants would provide, in Chapter 1, a summary listing of the deviations and an identification of the sections in the Safety Analysis Report where the deviations are described and justified. The identification and justification by CP and ML applicants of deviations from the acceptance criteria in the applicable revision of the SRP is expected to enhance the quality of the staff's review of the application and assist the staff in making the determinations required by

10 CFR 50. Such documentation would also more clearly identify the bases of the acceptability of the facility design and its relationship to current licensing criteria. Several methods of implementing this requirement are under consideration (issuance of a Regulatory Guide, issuance of a Policy Statement or issuance of rules changes). The Commission is also considering the imposition of similar requirements on holders of operating license and applicants for operating licenses. A Federal Register Notice for this class of licensee/applicant is to be issued in the near future.

Public comments are requested with respect to: (1) The four areas identified above for special consideration; (2) the requirements identified in NUREG 0718, and (3) the requirement to document and justify deviations from the applicable revision of the Standard Review Plan. Comments are also requested regarding the extent to which the judgments reached by the Commission on items (1) and (2) should form the basis for instructions to licensing and appeal boards in construction permit and manufacturing license proceedings. With respect to item (3), public comments regarding the method of implementation of the requirement are requested. Following receipt of public comments, the Commission will finalize its position and take appropriate action, including

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the possible issuance of final rules on some or all of these matters.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of Title 5 of the United States Code, notice is hereby given that amendment of the Commission's regulations in 10 CFR Parts 2 and 50 with regard to some or all of the subjects and issues described in this Notice is contemplated.

45 FR 65466

Published 10/2/80

Comment period expires 11/3/80

### Domestic Licensing of Production and Utilization Facilities; Interim Requirements Related to Hydrogen Control and Certain Degraded Core Considerations

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The accident at Three Mile Island, Unit 2, resulted in a severely damaged or degraded reactor core with the concomitant release of radioactive material to the primary coolant system and generation of hydrogen from fuel cladding-water reaction well in excess of the amounts required to be assumed for design purposes by the current Commission regulations. Furthermore, the accident revealed design and operational limitations that existed relative to mitigating the consequences of the accident and determining the status of the facility during and following the accident. The Nuclear Regulatory Commission (NRC) is therefore initiating a long-term rulemaking to consider to what extent, if any, nuclear power plants should be designed to deal effectively with degraded-core and core-melt accidents. In the interim, the Commission is considering amending its regulations to improve hydrogen management in light-water reactor facilities and to provide specific design and other requirements to mitigate the consequences of accidents resulting in a degraded reactor core.

**DATES:** Comment period expires November 3, 1980. Comments received after November 3, 1980 will be considered if it is practical to do so, but assurance of consideration cannot be given except as to comments filed on or before November 3, 1980.

**ADDRESS:** Written comments or suggestions for consideration in connection with the proposed

amendments should be submitted to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments received may be examined in the Commission's Public Document Room at 1717 H Street NW., Washington, D.C.

#### FOR FURTHER INFORMATION CONTACT:

Morton R. Fleishman, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, telephone 301-443-5921.

**SUPPLEMENTARY INFORMATION:** The recent accident at Three Mile Island, Unit 2 (TMI-2), resulted in a severely damaged or degraded reactor core with a concomitant release of radioactive material to the primary coolant system and a large amount of fuel cladding metal-water (zirconium-oxygen) reaction in the core with hydrogen generation well in excess of the amounts required to be considered for design purposes by 10 CFR § 50.44, Standards for combustible gas control system in light water cooled power reactors. The accident revealed design and operational limitations that existed relative to mitigating the consequences of the accident and determining the status of the facility during and following the accident. To correct this situation the Commission has decided to revise its regulations so as to incorporate improvements derived from studies of the TMI-2 accident. The initial findings relative to the TMI-2 accident have been published in NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations," dated July 1979, and NUREG-0585, "TMI-2 Lessons Learned Task Force Final Report," dated October 1979.\*

The NRC's Office of Nuclear Reactor Regulation has also sent letters to all licensees of operating nuclear power plants, operating license applicants, licensees of plants under construction and pending construction permit applicants, informing them of the followup actions that should be taken in light of the lessons learned from TMI-2. Specifically for all operating nuclear power plants, letters were sent on September 13, 1979 concerning "Followup Actions Resulting from the NRC Staff Reviews Regarding the Three Mile Island Unit 2 Accident," in which a set of recommendations was presented that was to be implemented. Regional meetings were held during the week of September 24, 1979 to explain in more detail each of the recommendations. On October 30, 1979, letters were again sent

\*Copies of these reports may be obtained from GPO Sales Program, Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

to all licensees of operating nuclear power plants to provide additional clarification of the NRC staff recommendations (Discussion of Lessons Learned Short Term Requirements).

The Commission has identified a number of recommendations that are specifically related to accidents that involve severely damaged or degraded reactor cores. These have been determined to be of such safety significance that they should be codified by regulation in order to provide assurance that the public health and safety will be adequately protected. The specific dates to be required for implementation by the proposed amendments have been revised from the dates in the previously mentioned letters. However, the implementation dates are being reconsidered during this phase of the rulemaking and specific comments on this subject are welcomed.

The following discussion provides the background information, justification and clarification of the amendments, relative to degraded core accidents, that are proposed to be adopted by the Commission in response to the TMI-2 accident. Additional specific guidance for complying with the proposed amendments may be found in the previously mentioned letters to licensees of operating nuclear power plants. The proposed amendments themselves are presented after the discussion. The discussion is organized in the same order as the proposed amendments for ease in convenient cross reference.

#### Hydrogen Management (§ 50.44(c)(3) (i) and (ii))

Section 50.44, Standards for combustible gas control system in light water cooled power reactors, requires a licensee or license applicant to show that, during the time immediately following a postulated loss-of-coolant accident (LOCA) but before effective operation of the combustible gas control system, either: (1) an uncontrolled hydrogen-oxygen recombination will not take place in the containment, or (2) the plant can withstand the consequences of uncontrolled hydrogen-oxygen recombination without loss of safety. If neither of these conditions can be shown, the containment must be provided with an inerted atmosphere or an oxygen deficient condition in order to provide protection against hydrogen burning and explosions during this time.

Section 50.44 gives credit to performance of the emergency core cooling system (ECCS) by specifying that the amount of hydrogen assumed to be contributed by the metal-water reaction shall be either five times the total amount of hydrogen calculated in demonstrating compliance with the

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ECCS acceptance criteria (§ 50.46, Acceptance Criteria for Emergency Core Cooling Systems for Light Water Nuclear Power Reactors) or an amount related to a specific depth of fuel clad reacted (approximately one percent of the fuel clad), whichever amount is greater. As a result, if a licensee or license applicant can show that the calculated metal-water reaction is well within the ECCS acceptance criteria (e.g., less than 0.5 percent of the fuel clad reacts which would be well within the 1.0 percent specified in the ECCS criteria), it is a straightforward task to demonstrate that there is no need to inert the containment of its plant, even if the plant has a small containment volume such as in a Mark I or Mark II boiling water reactor (BWR).

Most operating BWR plants with Mark I containments have been inerted due to guidance provided in an early version of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment following a Loss-of-Coolant Accident," in which the designs were required to accommodate five percent metal-water reaction during the LOCA blowdown. This guide was in effect prior to promulgation of § 50.44. The combination of containment volume and zirconium inventory of the BWR Mark I containments made it necessary to inert these containments to ensure that the hydrogen concentration in containment following a LOCA would not exceed the lower flammability limit of 4 volume percent in air. Section 50.44 and associated changes to Regulatory Guide 1.7 allowing credit for ECCS performance potentially reduced the amount of metal-water reaction that was required to be considered in the containment design. This permitted Hatch 2, a Mark I BWR plant located in Baxley, Georgia, and operated by the Georgia Power Co., to operate without inerting. In addition, it would permit Mark II BWR plants now in the operating license (OL) review process to operate without inerting. By a ruling of the Appeal Board (ALAB-229, September 18, 1974; 8 AEC 425 (1974)), inerting was not required for the Vermont Yankee plant, located in Vernon, Vermont, and operated by the Vermont Yankee Nuclear Power Corporation.

The Commission believes that pending completion of a long-term rulemaking proceeding related to consideration of degraded or melted cores in safety regulation, which will include a reevaluation of all positions on the inerting of reactor containments, it would be prudent, in the interim, to establish certain inerting requirements for operating plants and those that will

be operated in the near term as follows: (1) Mark I and II BWR containments be inerted. While the decrease in residual risk due to inerting these containments is small, as determined by probabilistic analyses, (a) there are no significant countervailing safety disincentives; (b) the cost of inerting is small; and (c) there has been substantial satisfactory experience with inerting Mark I containments. (2) Ice condenser containments for pressurized water reactor (PWR) plants not be inerted at this time. While inerting ice condenser containments would result in a greater decrease in the calculated residual risk, compared to BWR containments, there are significant reasons for not inerting such as, (a) inerting would result in an increased personnel hazard, since these containments must be entered frequently during routine operations for maintenance purposes; (b) inerting could lead to a decrease in safety performance of the ice condenser because of increased difficulty in maintenance; and (c) inerting is not within proven technology for this type of containment and would have to be thoroughly analyzed and tested (with likely changes in design) before imposing such a requirement. (3) Other PWR containments not be inerted at this time. While inerting would likely produce a small decrease in residual risk, any decrease would be substantially less than for Mark I or II BWR containments because of the substantially larger containment volumes and the fact that these containments can probably withstand higher pressures from hydrogen burns. Both of these considerations would permit substantially greater volumes of hydrogen to be generated.

The Commission is therefore considering amending § 50.44 to require that: (1) all operating Mark I BWRs be inerted; (2) Mark I and II BWRs now under construction be inerted upon operation; and (3) licensees now operating PWR plants or Mark III BWR plants, or license applicants that plan to operate these plants, study the various methods of controlling the behavior of large amounts of hydrogen before the containment is threatened, or of mitigating the consequences of accidents involving the generation of large amounts of hydrogen. These studies should take the adverse safety aspects of the design features as well as their costs into account, recognizing that tradeoffs may be necessary. They should cover a range that includes both the realistic (best estimate) ultimate strength of the containment as well as the conservative design basis. The maximum duration for hydrogen generation was specified to be eight

hours because it was felt this provided an adequate limit based on credible accident scenarios. It neglects the hydrogen generated by radiolytic decomposition which is more than adequately accounted for by the assumption used for the percent of fuel clad that reacts. For purposes of providing a reasonable bound to the studies, an upper limit of 75 percent should be used for the percent of fuel clad that reacts to produce hydrogen. As indicated previously, this can also account for the hydrogen that would be generated from other possible sources such as from the stainless steelsteam reaction or radiolytic decomposition. The Commission will require that the studies include sensitivity analyses concerning the effects of different amounts of hydrogen, and that the methods to be considered for hydrogen control include but not be limited to: (1) inerting of containment; (2) use of hydrogen recombiners; (3) use of purge systems; (4) use of a halon suppressant system; (5) use of a filtered-vent system; (6) use of a hydrogen combustion system; (7) use of water fog spray; and (8) combinations of these. It is anticipated that, where appropriate, owners groups will be formed for similar facilities to perform these studies and thus eliminate duplication.

It should be noted that this proposed amendment will require that the Mark I containments for the Vermont Yankee and Hatch 2 BWR plants be treated in a manner similar to other operating BWR plants with Mark I containments. The first domestic BWR Mark II is scheduled for fuel loading in late-1980, and the first domestic BWR Mark III is scheduled for fuel loading about September 1981.

Additional information and discussion on the inerting of light-water-reactor containments may be found in SECY-80-107, "Proposed Interim Hydrogen Control Requirements for Small Containments," and SECY-80-107 A and B, "Additional Information Re: Proposed Interim Hydrogen Control Requirements,"\* and NUREG-0578 and NUREG-0585 which were referenced earlier.

The Commission realizes that amending § 50.44 to require inerting of Mark I and II BWRs does not settle the issue of how to treat degraded core accidents in general and hydrogen management in particular. There are numerous regulations which may be affected by the consideration of degraded core accidents. Some of these are Criteria 16 and 50 of Appendix A to 10 CFR Part 50, which are related to containment design, and § 100.11 of 10

\*Copies of those documents are available from the Commission's Public Document Room at 1717 H Street NW., Washington, D.C.



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CFR Part 100, which is related to the siting of nuclear reactors. Also, the remainder of § 50.44, particularly in regard to the hydrogen generation assumptions, is not being considered for revision at this time. Since § 50.44(d) is not being changed, the hydrogen control system does not have to accommodate any more hydrogen than that associated with either five times the metal-water reaction calculated to occur during a postulated loss-of-coolant accident or a one percent metal-water reaction, whichever is greater. The Commission is performing a systematic review of all of its regulations from the standpoint of consistency relative to the treatment of degraded core accidents. Furthermore, the Commission has initiated a longer term rulemaking effort relative to consideration of degraded or melted cores in safety regulation that would identify, among other things, whether and to what extent designers need to consider degraded core accidents.

### **Dedicated Hydrogen Control Penetrations (§ 50.44(c)(3)(iii))**

Paragraphs 50.44(d), (e), (f), and (g) of 10 CFR Part 50 require the incorporation of hydrogen recombiners or post-accident purge systems for the control of combustible gas concentrations inside containment, depending on the date of the notice of hearing on the application for the construction permit (CP) for the plant. All plants for which the CP hearing notice was published after November 5, 1970, must use combustible gas control systems such as hydrogen recombiners for the post-accident control of combustible gas in the containment building. Plants for which the notice of hearing was published prior to November 5, 1970, may use post-accident purging of the containment for combustible gas control depending on whether or not they meet certain site radiation dose criteria.

The TMI-2 plant had provisions for post-accident installation and operation of an external hydrogen recombiner for combustible gas control. However, the design of the external recombiner hookup at TMI-2 used the 36-inch containment penetrations for the normal containment purge system by tapping 4-inch lines off the purge lines outside the containment building between the building and the outer containment isolation valves. Operation of the hydrogen recombiner required the opening of the inboard 36-inch containment isolation valve in both a containment purge system inlet and outlet line. With this design, once the hydrogen recombiner is put into operation, containment integrity is vulnerable to a single active failure.

That is, a spurious or inadvertent opening of one of the 36-inch outboard containment isolation valves would result in the venting of the containment to the environment.

The purpose of this proposed amendment is to provide assurance that facilities with hookups for external recombiners or post-accident purge systems that are susceptible to single failures, and that would result in operation of the unit beyond its design capacity, have design modifications made to correct this situation. Systems designed to meet these proposed requirements would not provide through-line leakage paths between the containment atmosphere and the environment and would eliminate the possibility of violating the containment integrity through a single active failure during hydrogen recombiner or purge system operation.

### **Hydrogen Recombiner Capability (§ 50.44(c)(3)(iv))**

As discussed previously, existing regulations permit plants for which the notice of CP hearing was published prior to November 5, 1970 to use only purge systems for combustible gas control subject to certain site radiation dose criteria. Depending on the containment design for these plants, the design basis for the purge system would lead to a release of the containment atmosphere for long-term hydrogen control in a period of time varying from a few weeks to several months.

Recombiners designed to meet current Commission requirements are not capable of preventing the hydrogen combustion and the resultant containment pressure spike that occurred in the TMI-2 containment building during the course of the accident. However, had there not been the capability to use a recombiner at TMI-2, it is possible that under a different accident scenario venting of the highly radioactive containment atmosphere may have been necessary in the weeks following the start of the accident.

As indicated in the discussion under Hydrogen Management, the Commission has initiated a long-term rulemaking effort relative to consideration of degraded or melted cores in safety regulation. Part of this rulemaking will involve a thorough reevaluation of hydrogen generation and control including the design bases for current hydrogen recombiners. However, based on the TMI-2 experience, and the desire to reduce the likelihood of releasing significant amounts of radioactive material to the environment, the Commission believes that it would be

prudent to provide means for hydrogen control that do not involve venting to the atmosphere. Because recombiner technology is well established and relatively inexpensive, the Commission is considering amending its regulations (new § 50.44(c)(3)(iv)) to require that all plants that currently rely on venting as the primary means for combustible gas control be provided with the capability to install external hydrogen recombiners following the start of an accident. This will require the use of dedicated containment penetrations as well as appropriate shielding, electrical power and operational procedures. The recombiner capability would only be required to satisfy the combustible gas control requirements of § 50.44 and thus would not be required to have any more capability than that needed to control hydrogen resulting from at most a 5 percent metal water reaction. This would provide a long-term hydrogen control capability but not a capability to quickly reduce the concentration of large amounts of hydrogen such as was generated during the TMI-2 accident. The need for this capability will be addressed during the long-term rulemaking on consideration of degraded or melted cores in safety regulation.

### **High Point Vents in the Reactor Coolant System (§ 50.44a(a))**

During the TMI-2 accident, a substantial volume of hydrogen was generated in the primary system. Helium fill-gas and fission product noble gases were also released. In other reactors under different circumstances, nitrogen, which drives the passive injection water system in PWRs, may also be a potential source of gas in the primary system. There is a concern that the accumulation of pockets of noncondensable gases in the primary system of a reactor may interfere with the natural circulation pattern that is regarded as an important safety feature in some accident sequences. In other sequences, pockets of noncondensable gases may interfere with pump operation. It has therefore been concluded that under certain circumstances it would be desirable to have provisions for venting noncondensable gases from high points in the primary system. The vents would have to be operable from a remote location, such as the control room.

Furthermore, the introduction of hydrogen from the primary system into the containment building can create a flammable atmosphere unless precautions are taken against this eventuality. Obviously, the decision to place such a vent system into operation



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would have to be made with the greatest care and restraint.

The purpose of this proposed amendment is: (1) to provide reactor coolant system and reactor vessel head high point vents remotely operable from the control room in reactors where these are not already in place; and (2) to provide assurance that the use of these vents will not further aggravate the challenge to containment or the course of the emergency. This proposed requirement is also interpreted to mean that other systems which may be required to maintain adequate core cooling such as the isolation condenser in BWRs, and the decay heat removal system, have the capability to be remotely vented if the accumulation of noncondensable gases would cause their loss of function. It is recognized that it is impracticable to vent each of the many thousands of tubes in a U-tube steam generator. Procedures should be developed which ensure that sufficient liquid or steam can enter the U-tube region so that decay heat can be effectively removed from the reactor coolant system. Proposed § 50.44a(g), "Training to Mitigate Degraded Core Accidents," includes plans and training for the use of the high point vents in emergency situations.

### **Protection of Safety Equipment and Areas Which May Be Used During and Following an Accident (§ 50.44a(b)(1))**

During and following an accident that results in a severely degraded core, a large amount of radioactive material may be released from the fuel as a result of cladding failure and be carried throughout the facility by the water in which it is dispersed, and by the circulating air. Systems that were not designed to contain large amounts of radioactive material, such as the auxiliary building at TMI-2, may become highly contaminated. The resulting radiation fields may make it difficult to effectively perform accident recovery operations or may impair the functioning of systems important to safety. These systems, although not specifically identified to perform post-accident functions, may nevertheless be of significant value after an accident. In addition, areas which may be used during and following an accident, such as control rooms, radwaste panels, emergency power supplies, and instrument areas may fall within the radiation fields of these systems.

Procedures for the use of these areas during and following an accident may be all that is necessary. In other instances, permanent or temporary shielding may be valuable. Remote instrument and control capability may

also solve some problems. Finally, the solution may require basic design improvements in the facilities, components or systems.

Areas that may be used during and following an accident should be provided with appropriate shielding and other radiation protection measures so that personnel performing necessary safety functions will not receive more than a 5 rem whole body dose or its equivalent to any part of the body. When determining anticipated personnel doses for the purpose of meeting this facility design criterion, care must be taken to determine the necessary occupancy time in a specific area. For example, areas in which there will be continuous occupancy are required to have much lower design dose rates than areas where minimal occupancy is expected. Therefore, the facility design should be based upon expected occupancy, as well as the radioactivity present and the shielding available.

The purpose of the proposed design requirement (§ 50.44a(b)(1)) is to facilitate operations during and following an accident in areas affected by systems that may contain abnormally high levels of radioactivity and to ensure that safety equipment in proximity to the resulting radiation fields is not unduly degraded. It should be noted that the radioactive material release specified in § 50.44a(b)(1)(i) represents the Commission's position at this time; however, this position will be reevaluated during the long-term rulemaking on consideration of degraded or melted cores in safety regulation.

### **In-Plant Iodine Instrumentation (§ 50.44a(b)(2))**

10 CFR Part 20 provides criteria for control of exposures of individuals to radiation in restricted areas, including airborne radioiodine. Since iodine concentrates in the thyroid gland, airborne concentrations must be known in order to evaluate the potential dose to the thyroid. If the airborne radioiodine concentration is overestimated, plant personnel may be needlessly required to perform operations while wearing respiratory protective equipment. Such action can sharply limit communication capability and may diminish personnel performance during an accident.

The concentration of radioiodine in air is determined by use of an iodine adsorbing cartridge through which air has been pumped. The cartridge is removed from the air pump and allowed to ventilate to permit any adsorbed noble gases to diffuse to the atmosphere. The cartridge is then analyzed for

radioactivity content, which is ascribed to radioiodine. While this procedure is conservative, it is possible for sufficient noble gas to be adsorbed and not released from the charcoal that the resulting radioiodine determination may be unduly conservative (high). Because the radioiodine concentration was greatly overestimated at TMI-2, plant personnel were required to perform their operations while wearing respiratory protective equipment when this use was not necessary. Actual concentrations were probably below levels requiring protective actions. One acceptable method to minimize this problem is to measure the radioiodine by gamma energy spectrum analysis. Equipment for these measurements is commercially available.

Effective monitoring of radioiodine levels in the building, under accident conditions, could include the use of portable analyzers and instruments. Alternatively, the capability should be provided to remove the filter sample to a low background, low contamination area, for analysis, to prevent measurement inaccuracies due to background radiation.

The purpose of the proposed requirement (§ 50.44a(b)(2)) is to improve the accuracy of measurement of airborne radioiodine concentrations within nuclear power plants.

### **Sampling During and Following an Accident (§ 50.44a(c))**

Timely information from reactor coolant and containment air samples can be important to reactor operators for their assessment of system conditions and can influence their subsequent actions to maintain the facility in a safe condition. During and following an accident, significant amounts of fission products may be present in the reactor coolant and containment air, creating high radiation levels throughout the facility. These high radiation levels may delay the obtaining of information from samples. The high background radiation, high sample radiation, and high levels of airborne contamination may render in-plant radiological spectrum analysis equipment inoperable during and after an accident.

At TMI-2, all of the above problems were encountered. There was no capability to obtain and analyze in a timely manner the reactor coolant and containment air samples under the existing accident conditions. The acquisition of reactor coolant and containment air samples was delayed for several days while personnel radiation protection precautions were taken. Once the samples were obtained,

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there were significant delays in performing the radiological spectrum analysis of the samples. The TMI-2 spectrum analysis equipment was inoperable because of high background radiation and the samples had to be packaged and flown to an offsite laboratory for analysis.

In summary, radiation levels at TMI-2 delayed acquisition of information to confirm that significant core damage had occurred. Prompt acquisition and analysis of reactor coolant samples within a few hours after the initial scram would have indicated that significant core damage had occurred. With such information, earlier remedial actions could have been taken. Similarly, analysis of an early containment air sample would have indicated the presence of hydrogen, and of radioisotopes indicating significant core damage, and the potential for a hydrogen explosion in the containment.

The sampling facilities are required to meet the design criteria of § 50.44a(c) as well as those of § 50.44a(b)(1). All sources of radiation should be considered in evaluating the designs, such as the sample lines, the samples themselves, and other radioactive lines near the sampling stations and analysis facilities.

### **Leakage Integrity Outside Containment (§ 50.44a(d))**

Several of the engineered safety features and auxiliary systems, located outside reactor containment, will or may have to function during a serious transient or accident with large radioactive inventories in the process fluids. The leakage from these systems, when operated, must be minimized or eliminated to prevent the release of significant amounts of radioactive materials to the environment. Examples of engineered safety features include residual heat removal, containment spray recirculation, and high-pressure injection recirculation. Examples of auxiliary systems include sampling, makeup and letdown, and waste gas. These systems are checked during pre-operational testing and startup testing but are not usually included in any periodic leak testing program. It is important that the plant operating staff know the leakage rates of these systems and minimize this leakage to the maximum extent practicable.

Some of these systems were used during the TMI-2 accident with resultant releases of radioactive materials to the auxiliary building ventilation systems. These releases are believed to have resulted from leaking relief valves, waste gas compressor seals, valves, manifold lines, and open rupture discs.

Uncertainties in the leakage rate of the residual heat removal system could have hindered its use if it had been needed. The lesson learned in this case was that more positive control and knowledge of the leakage rates of these systems is needed to provide the operating staff with the maximum usable equipment and to restrict or control the release of radioactive materials to the environment.

The purposes of this proposed amendment are to require that every reasonable effort be made to eliminate or reduce the leakage from these systems, to require that periodic tests are performed to ensure that the leakage from these systems is minimized to the maximum extent practicable, and to provide the plant staff with current knowledge of the system leakage rates.

### **Accident Monitoring Instrumentation (§ 50.44a(e))**

The accident at TMI-2 demonstrated that containment conditions can arise that are more severe than those that were postulated to occur during design basis accidents.

Approximately ten hours after the start of the accident at TMI-2, a 20-psig pressure spike occurred in the containment building. It is believed that the pressure spike was due to the rapid burning of hydrogen gas in the containment atmosphere. It is known that the pressure spike represented a serious condition within containment and that the pressure indication itself could have been, but was not then accepted as, critical information to the plant operators. The events at TMI-2 clearly reaffirm the need for containment pressure indication in the control room. The instrumentation range should extend from a lower limit of five psi below normal operational pressure to an upper limit of three times the design pressure for concrete containments and four times the design pressure for steel containments.

The sequence of events during the accident at TMI-2 indicate another item of information which could have been, but was not immediately accepted as, critical information in the diagnosis of the accident, namely the free liquid inventory in the containment building. During the accident, reactor primary coolant water vented through the drain tank relief valve and drained to the containment sump. Prior to containment isolation, water in the containment sump was discharged to the auxiliary building sump tank. Because containment sump pump operation had routinely occurred several times a day before the accident, the transfer process was not recognized as a potential source

of contaminated water in containment. Additionally, the accumulation of water in the TMI-2 containment probably contributed to equipment failure due to flooding. The events clearly establish a need for accurate containment water level indication in the control room, with instrument ranges which include maximum accident flooding levels.

The third item of information which was subsequently considered to be of critical importance in determining containment conditions at TMI-2 was a measurement of the hydrogen concentration in the containment atmosphere. Hydrogen gas was produced as a result of the reaction of zirconium metal from the fuel cladding and primary coolant water in the reactor core. The gas was vented from the reactor coolant system to the containment atmosphere. The free hydrogen in containment resulted in a rapid burn and pressure spike event in the containment. Samples of containment atmosphere were taken following the accident at TMI-2, but the process involved risk to workers and did not yield real-time information. The events clearly show that it is essential that the operator have continuous information about the containment atmosphere hydrogen concentration for indication of the need and use of reactor pressure vessel venting or containment combustible gas control systems.

Indication of containment pressure, containment water level, and hydrogen concentration in the containment atmosphere will provide critical information to the operator on containment conditions during and following an accident and should be qualified to the criteria for instrumentation important to safety. These parameters should be continuously provided and recorded in the control room of all nuclear reactor power plants.

The radiation level inside containment is closely related to the potential release of radioactive materials in the plant effluents. At TMI-2, the radiation monitor in containment had a range limit of  $10^4$  R/hr, which was adequate to meet the conditions of the accident. In reviewing the monitoring capabilities of other plants, however, it was found that there are few operating plants with instrumentation capable of measuring levels in excess of  $10^4$  R/hr. During the initial post-accident period at TMI-2, questions arose as to the validity of the instrument readout and to the operational characteristics of the instrument under the accident environment. The Commission considers that the high-level monitoring

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instrumentation in the containment at TMI-2 was adequate to measure the existing radiation levels; however, it also considers that the range limit of this instrumentation should be increased to greater than  $10^4$  R/hr and consist of at least two channels, each separated physically from the other, and that the instrumentation system should be qualified to the criteria for instrumentation important to safety.

Guidance on the ranges and specifications of the accident monitoring instruments discussed above can be found in proposed Revision 2 of Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," which is presently out of public comment.

Radioactive gaseous effluent monitors designed to operate under conditions of normal operation and anticipated operational occurrences do not have sufficient range to function under release conditions associated with certain types of accidents. General Design Criterion 04 of Appendix A to 10 CFR Part 50 requires that effluent discharge paths be monitored for radioactivity that may be released from postulated accidents. The gaseous effluent monitoring system for TMI was evaluated during the licensing review and was found to be adequate for calculated releases from previously postulated accidents; however, the TMI-2 experience gives rise to new postulated design basis accidents and their associated releases.

At TMI-2, the noble gas section of the gaseous radioactive effluent monitor serving the plant vent was designed to measure concentrations up to  $10^{-3}$   $\mu$ Ci/cc (Xe-133). During the initial phases of the accident, radioactive noble gas effluent monitor readings were off scale, with actual release concentrations calculated to be on the order of  $10^{-1}$   $\mu$ Ci/cc to 1  $\mu$ Ci/cc.

A section of the TMI-2 plant vent gaseous radioactive effluent monitor designed to detect and measure radioiodine releases, while remaining on scale, gave an erroneous indication of high radioiodine content in releases from the vent during the initial phases of the accident. The indication was caused by adsorption of short-lived noble gases in the charcoal cartridge, with the presence of the noble gases being read and erroneously interpreted as

radioiodine by the monitor readout system.

A similar condition existed in the section of the plant vent monitor designed to detect and measure the presence of particulate radioactive material in plant gaseous effluents. In this case, the presence of noble gases in the gas stream passing through the monitor's particulate filter was sufficient to cause the particulate section of the monitor to read off scale and erroneously indicate that large quantities of particulates were being released from the plant vent.

The problem is generic. A recent survey of existing radioactive gaseous effluent monitoring capabilities of operating plants shows that less than 20 percent of operating plants have monitors that would have stayed on scale under the conditions of the TMI-2 accident. Also, it can be shown that the potential releases from postulated accidents may be several orders of magnitude higher than was encountered at TMI-2. Under such circumstances, none of the effluent monitors now in service at any operating plant would remain on scale.

A requirement for effluent monitors to have an operating range sufficient to permit on-scale readings under accident conditions is needed to provide meaningful release information for offsite emergency actions. Examples of anticipated release points that should be monitored are: the auxiliary building, radwaste building, waste gas decay tanks, main condenser air ejector, BWR main condenser vacuum pump exhaust, PWR steam safety valves and atmosphere steam dump valves, and BWR turbine building. Other examples would be areas that communicate directly with systems which may contain primary coolant or containment gases, such as letdown and emergency core cooling systems, and external hydrogen recombiners.

Based on data submitted by plant operators, the installed capability exists for monitoring noble gas releases up to a concentration of approximately  $1 \times 10^3$   $\mu$ Ci/cc, which is a factor of  $10^5$  higher than the maximum range of the instrumentation in use at TMI-2.

It has been calculated that the maximum concentration of undiluted noble gases which could be present in effluent gaseous releases is on the order of  $10^5$   $\mu$ Ci/cc. The Commission considers the upper detection limit of  $10^5$   $\mu$ Ci/cc for noble gases to be technically achievable. Guidance on the ranges and specifications for the required instruments can be found in proposed Revision 2 of Regulatory Guide 1.97.

The Commission understands that technological problems exist in monitoring of radioactive particulates and radioiodines in accident level releases, at calculated maximum radioiodine concentrations on the order of  $10^5$   $\mu$ Ci/cc. It has therefore concluded that sampling of plant gaseous effluents, with laboratory analysis of samples subsequent to release, is the only currently valid technique for monitoring accident level releases of radioiodines and particulates. The proposed amendment would require that this technique be used until on-line monitoring capability for accident level releases is developed. Existing radioiodine effluent monitoring equipment should be used to monitor radioiodine releases within instrumentation design limitations, with sampling and analysis being used to extend monitoring capabilities to accident levels.

### Detection of Inadequate Core Cooling (§ 50.44a(f))

During the TMI-2 accident, the condition of low water level in the reactor vessel and inadequate core cooling was not recognized for a long period of time. This problem was the result of a combination of factors including an insufficient range of existing instrumentation, inadequate emergency procedures, inadequate operator training, unfavorable instrument location (scattered information), and perhaps insufficient instrumentation. The instrumentation already available on some operating reactors that could indicate inadequate core cooling includes core exit thermocouples, cold leg and hot leg resistance temperature detectors (RTDs), in-core neutron detectors, ex-core neutron detectors, and reactor coolant pump current meters. Generally, such systems were included in the reactor design to perform functions other than monitoring of core cooling or indication of vessel water level. The as designed and field-modified instrumentation at TMI-2 did not provide sufficient information to indicate reduced reactor vessel coolant level, core voiding, and deteriorated core thermal conditions to the reactor operators at the time of the accident, although, in retrospect, this could be inferred from the instrument records. An additional diagnostic tool that was not available was a continuous indication of the margin to saturated conditions in the primary coolant. A meter to provide this information is proposed to be required for all PWRs.

The purpose of this proposed amendment is to provide the reactor

\*Copies of this draft regulatory guide may be obtained from the Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.



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operator with instrumentation, procedures, and training necessary to readily recognize and implement actions to correct or avoid conditions of inadequate core cooling.

### Training to Mitigate Degraded Core Accidents (§ 50.44a(g))

The TMI-2 accident has pointed out the need to improve the capability to recognize, diagnose, control and mitigate the consequences of accidents resulting in a degraded reactor core. That is, the operating personnel should have the capability to respond to events that are more severe than those transients and accidents considered as the design basis for the plant.

The purpose of this proposed amendment is to require additional training, for all operating personnel, specifically in relation to accidents involving a degraded core. This training will prepare the operating personnel to use all the available instrumentation and equipment to properly respond to such accidents.

In addition to the proposed interim rulemaking, the Commission has initiated a long-term rulemaking in which it is considering whether and to what extent its regulations should be amended to deal effectively with a broad range of accidents involving a reactor whose core has been degraded or melted. As part of the long-term rulemaking, an advance notice of proposed rulemaking has been issued soliciting comments on certain specific questions. Any views and comments submitted in response to this notice of proposed interim rulemaking will also be considered, along with comments submitted in response to the advance notice of proposed rulemaking, in the overall long-term rulemaking related to consideration of degraded or melted cores in safety regulation. Pending completion of the long-term rulemaking, it is the Commission's judgment that implementation of the requirements hereby being proposed will, in the interim, provide sufficient assurance that the health and safety of the public will be adequately protected relative to degraded core accidents. Other documents which support this position are SECY-80-107, 107A, 107B, NUREG-0578 and NUREG-0585 which were referenced previously.

(Separate views of Commissioners Gilinsky and Bradford are attached.)

Accordingly, notice is hereby given that, pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of title 5 of the United States Code, adoption of the following

amendments to 10 CFR Part 50 are contemplated.

### PART 50—DOMESTIC LICENSING OR PRODUCTION AND UTILIZATION FACILITIES

1. Section 50.44 of 10 CFR Part 50 is amended by revising paragraph (c) to read as follows:

#### § 50.44 Standards for combustible gas control system in light water cooled power reactors.

(c)(1) For each boiling or pressurized light-water nuclear power reactor fueled with oxide pellets within cylindrical zircaloy cladding, it shall be shown that during the time period following a postulated LOCA but prior to effective operation of the combustible gas control system, either: (i) An uncontrolled hydrogen-oxygen recombination would not take place in the containment; or (ii) the plant could withstand the consequences of uncontrolled hydrogen-oxygen recombination without loss of safety function.

(2) If neither of these conditions can be shown, the containment shall be provided with an inerted atmosphere or an oxygen deficient condition in order to provide protection against hydrogen burning and explosions during this time period.

(3) However:

(i) As soon as practicable but not later than June 30, 1981, an inerted atmosphere shall be provided for each boiling light-water reactor facility for which the application for a construction permit was docketed between March 15, 1964 and July 1, 1972; and

(ii) Design analyses shall be performed (A) for each boiling light-water reactor facility for which the application for a construction permit was docketed after July 1, 1972 and, (B) for each pressurized light-water reactor facility, to evaluate measures that can be taken to mitigate the consequences of large amounts of hydrogen generated within 8 hours after the start of an accident (hydrogen resulting from the reaction of up to about 75 percent of the fuel cladding with water). These design analyses and a proposed design (or designs) to mitigate the consequences of hydrogen in containment shall be completed and submitted to the Commission by (8 months from effective date of rule) or the date of docketing of the application for the operating license, whichever is later.

(iii) By June 30, 1981, facilities that rely upon external recombiners or purge systems to satisfy the requirements of § 50.44 shall be provided with containment penetrations for the

external recombiners or purge systems that either:

(A) are dedicated to that service only, conform to the requirements of Criteria 54 and 56 of Appendix A, are designed against an assumed single failure, and are sized to satisfy the flow requirements of the external recombiners or purge systems, or

(B) are of a combined design for use by either external recombiners or purge systems and other systems, conform to the requirements of Criteria 54 and 56 of Appendix A, are designed against an assumed single failure both for containment isolation purposes and for operation of the external recombiners or purge systems, and are sized to satisfy the flow requirements of the external recombiners or purge systems.

(iv) By January 1, 1982, facilities that rely upon purge systems as the primary means for controlling combustible gases following a LOCA shall be provided with the capability to install external recombiners following the start of an accident that meet the combustible gas control requirements of this section. The containment penetrations that are used must meet the criteria in paragraphs (c)(3)(iii)(A) and (c)(3)(iii)(B) of this section applicable to external recombiners.

2. A new § 50.44a is added to 10 CFR Part 50 to read as follows:

#### § 50.44a Design requirements to mitigate the consequences of accidents resulting in a degraded core.

(a) *High Point Vents.* By January 1, 1982, each boiling and pressurized light-water nuclear power reactor shall be provided with reactor coolant system and reactor vessel head high point vents<sup>1</sup> remotely operated from the control room to provide improved operational capability for maintaining adequate core cooling following an accident. Since these vents form a part of the reactor coolant pressure boundary, the design of the vents and associated controls, instruments and power sources must conform to the requirements of Appendix A and Appendix B. In particular, these vents shall be designed in such a way that no single failure could result in either (1) a loss of the capability of the vents to perform their safety functions or (2) inadvertent actuation of a vent.

(b)(1) *Protection of Safety Equipment and Areas Which May be Used During and Following an Accident.* By January 1, 1982, each boiling and pressurized light-water nuclear power reactor shall

<sup>1</sup> Except that the tubes in U-tube steam generators do not require venting.



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be provided with both adequate access to areas which may be used during and following an accident and protection of safety equipment so that an accident, which results in the release of large amounts of radioactive material, will not limit personnel occupancy or degrade safety equipment, by the radiation fields that may exist during and following the accident, to the extent that required safety functions cannot be accomplished.

(i) The facility design must be based on a release of radioactive material from the fuel to the primary coolant system that is not less than 100% of the core equilibrium noble gas inventory, 50% of the core equilibrium halogen inventory, and 1% of the remaining core fission products. For equipment and areas affected by the reactor coolant, it shall be assumed that the above distribution of radioactive material is intimately mixed with the coolant water. For equipment and areas affected by the containment atmosphere, it shall be assumed that not less than 100% of the core equilibrium noble gas inventory and 25% of the core equilibrium halogen inventory are uniformly dispersed in the containment atmosphere and an additional 25% of the core equilibrium halogen inventory and 1% of the remaining core fission products are uniformly distributed on surfaces exposed to the containment atmosphere.

(ii) The facility design must be such that an individual operator will not receive more than a 5 rem whole body dose, or its equivalent to any part of the body, while performing a necessary safety function during and following an accident.

(2) *In-Plant Iodine Instrumentation.* By January 1, 1981,<sup>2</sup> each boiling and pressurized light-water nuclear power reactor shall be provided with instrumentation, equipment and associated training and procedures for determining, under accident conditions, the airborne radioiodine concentration in areas within the facility where plant personnel may be present during and following an accident.

(c) *Sampling During and Following an Accident.* By January 1, 1982, each boiling and pressurized light-water nuclear power reactor shall be provided with the capability for personnel to obtain and quantitatively analyze a reactor coolant or containment atmosphere sample during and following an accident.

(1) The facility design must be based on the radioactive material release

terms described in paragraph (b)(1)(i) of this section.

(2) The capability to obtain a sample must include the capability for doing so, promptly, and without incurring a radiation exposure to any individual in excess of 3 rem to the whole body, or its equivalent to any part of the body.

(3) The capability to quantitatively analyze a sample must be based on the use of either in-line monitoring or an onsite radiological and chemical analysis facility, and must provide, as needed, quantification of the following:

(i) Those radioisotopes necessary to determine the degree of core damage;

(ii) Hydrogen in the containment atmosphere;

(iii) Total dissolved gases and dissolved hydrogen gas in the reactor coolant;

(iv) Boron in the reactor coolant; and

(v) Chloride in the reactor coolant.

(d) *Leakage Integrity Outside Containment.*

(1) Each boiling and pressurized light-water nuclear power reactor licensee shall implement leak reduction measures so that leakage from systems outside containment (systems that would or could contain highly radioactive fluids during and following a serious transient or accident) is eliminated or minimized to the maximum extent practicable to prevent the release of significant amounts of radioactive material during and following an accident. Consideration shall be given to reductions of potential release paths that could result from design or operator deficiencies.

(2) Each boiling and pressurized light-water nuclear power reactor licensee shall establish and implement a program of preventive maintenance to eliminate or minimize, to the maximum extent practicable, leakage from systems outside containment. This shall include periodic integrated leak tests at intervals not to exceed each refueling cycle as well as the reduction of potential release paths by appropriate operator training.

(e) *Accident Monitoring Instrumentation.* Each boiling and pressurized light-water nuclear power reactor shall have the capability during and following an accident for:

(1) Providing and recording in the control room a continuous indication of:

(i) Containment pressure by January 1, 1981<sup>2</sup>;

(ii) Hydrogen concentration in the containment atmosphere by October 1, 1981;

(iii) Containment water level by January 1, 1981<sup>2</sup>;

(iv) Containment radiation level by October 1, 1981;

(v) Radioactive noble gas concentrations in the effluents by October 1, 1981; and

(2) Quantifying the concentration of radioiodines and radioactive particulates in the airborne effluents at each anticipated release point by October 1, 1981.

(3) All the instruments and monitoring systems used for accident monitoring shall be designed and qualified (with extended ranges) to perform their function following an accident characterized by the radioactive material release terms described in paragraph (b)(1)(i) of this section.

(f) *Detection of Inadequate Core Cooling.*

(1) Each boiling and pressurized light-water nuclear power reactor licensee shall develop and implement procedures and training to be used by the operators to recognize the existence of inadequate core cooling and low coolant level in the reactor core using available instrumentation.

(2) Each pressurized light-water nuclear power reactor shall be provided with a primary coolant saturation meter (subcooling meter) that provides in the control room a continuous, recorded, on-line indication, of the primary coolant saturation condition.

(3) By January 1, 1982, each boiling and pressurized light-water nuclear power reactor shall be provided with instrumentation such as a reactor vessel water level indicator which supplies to the control room a recorded, unambiguous, direct indication, of inadequate core cooling. The indication must cover the complete range from normal operation to complete core uncovering and give advance warning of the approach of inadequate core cooling.

(4) All instruments used to detect the existence of inadequate core cooling shall be designed and qualified to perform their function following an accident characterized by the radioactive material release terms described in paragraph (b)(1)(i) of this section.

(g) *Training to Mitigate Degraded Core Accidents.* By April 1, 1981, each boiling and pressurized light-water nuclear power reactor licensee shall include in its training program for all operating personnel training to recognize, control and mitigate the consequences of accidents in which the core is severely damaged. The training shall include the use of all available structures, systems and components that can control or mitigate degraded core accidents.

(Secs. 103, 161b, Pub. L. 83-703, 68 Stat. 936, 948; Sec. 201, as amended, Pub. L. 93-438, 89 Stat. 1242 [42 U.S.C. 2133, 2201(b), 5841])

<sup>2</sup> Or 30 days after the effective date of the rule, whichever is later.

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### Commissioner Gilkinsky's Separate Views Regarding Publication of the Proposed Rule—Interim Requirements Related to Hydrogen Control and Certain Degraded Core Considerations

As the summary of this Federal Register Notice states at the outset, "the accident at Three Mile Island, Unit 2, resulted in . . . generation of hydrogen from fuel cladding-water reaction well in excess of the amounts required to be assumed for design purposes by the current Commission regulations." Yet, in approving this Notice, the Commission in effect proposes to retain the outdated regulations. The proposed rule does little more in the area of hydrogen control than to prevent elimination of a protective measure now in place—use of a nitrogen atmosphere in the containment of boiling water reactors to prevent hydrogen burning - where such elimination might be permitted by current regulations. In the case of pressurized water reactors with ice condenser containments and the latest design boiling water reactors the proposed rule does not advance the level of protection at all. It is this aspect of the proposed rule that I disagree with.

The existing rule (10 CFR 50.44) is based on a view that only a small amount of hydrogen can be generated during an accident. Prior to the Three Mile Island accident, reaction of as much as one percent of the reactor fuel's zirconium cladding with water was regarded as extremely unlikely, even in a major loss of coolant accident. Now we know that larger quantities of hydrogen might be generated in lesser accidents—as much as 50 percent of the zirconium cladding in the TMI-2 core is estimated to have reacted with water thereby releasing several hundred kilograms of hydrogen to the containment. In proposing not to require additional hydrogen control measures in ice condenser containments, the staff and Commission have argued that the changes brought about after the Three Mile Island accident have now really made the probability of generating large quantities of hydrogen insignificant. That assumes a rather more complete understanding of the operational characteristics of large power reactors than I believe experience shows. The Commission should have proposed that all powers reactors demonstrate an ability to cope effectively with amounts of hydrogen roughly comparable to that generated at Three Mile Island.

Commissioner Bradford agrees with these comments except for the statement suggesting that the publication of the rule for comment "in effect proposes to retain the outdated regulations."

➤ 45 FR 65474

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### 10 CFR Part 50

#### Domestic Licensing of Production and Utilization Facilities; Consideration of Degraded or Melted Cores in Safety Regulation

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Advance notice of proposed rulemaking.

**SUMMARY:** The U.S. Nuclear Regulatory Commission is considering amending its regulations to determine to what extent commercial nuclear power plants should be designed to cope with reactor accidents beyond those considered in the current "design basis accident" approach. In particular, this rulemaking would consider the need for nuclear power plant designs to be evaluated over a range of degraded core cooling events with resulting core damage and the need for design improvements to cope with these events.

This advance notice of proposed rulemaking is being issued to invite advice and recommendations on several questions concerning design and operational improvements for dealing with degraded core cooling. Therefore, the preliminary views expressed in this notice may change in light of comments received. In any case, there will be an opportunity later for additional public comment in connection with any proposed rule that may be developed by the Commission.

**DATES:** The comment period expires December 31, 1980.

**ADDRESSES:** Interested persons are invited to submit written comments and suggestions to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments received by the Commission may be examined in the Commission's Public Document Room at 1717 H Street NW., Washington, D.C. Comments may also be delivered to Room 1121, 1717 H Street NW., Washington, D.C., between 8:15 a.m. and 5:00 p.m.

**FOR FURTHER INFORMATION CONTACT:** M. S. Medeiros, Jr., Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 or telephone (301) 443-5913.

#### SUPPLEMENTARY INFORMATION:

##### Historical Background

The Nuclear Regulatory Commission (NRC) is responsible for licensing and regulating nuclear power plants. Before a nuclear power plant can be built at a particular site, a construction permit must be obtained from the NRC. As a major part of the application for a construction permit, the applicant files a Safety Analysis Report. This report presents the design criteria and preliminary design information for the proposed nuclear power plant and provides information on the proposed site. The report also discusses various abnormal conditions and accident situations and describes safety features to be provided to prevent accidents or, if they should occur, to mitigate their effects on public health and safety.

In nuclear power plants, large amounts of radioactive material are generated during fission of nuclear reactor fuel. Although this radioactive material generally remains in the fuel pellets, significant amounts can be released to the reactor coolant during accident conditions. For appreciable amounts of radioactive material to be released from the fuel, it must experience damage from one or more of several possible causes. For example, a hydraulic-mechanical accident at normal fuel temperatures can burst fuel cladding resulting in release of radioactive material normally retained in the gap between the fuel pellets and the fuel clad. A more serious type of accident involving higher fuel temperatures might, in addition to rupturing fuel cladding, cause oxidation of the cladding. This, in turn, would cause hydrogen to be generated and released which would compound the severity of the accident. A still more serious accident might involve very high fuel temperatures and oxidation of a large fraction of the core's zirconium. In this case, not only would large amounts of hydrogen be released to the containment building, but other thermal reactions could result in the release of radioactive material normally held captive in the fuel pellets. Finally, an accident so severe that core melting occurs could release large amounts of radioactive material to the environment if reactor containment integrity were also to be lost.

Based on these considerations, a broad range of nuclear power plant abnormal conditions and accidents with

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the potential to cause fuel clad damage and release of radioactive material to the environment has been identified and categorized for analysis. Attempting to prevent abnormal conditions and accidents and mitigating their potential consequences have been the primary objectives of nuclear power plant safety design. The Safety Analysis Report is a key analysis document supporting the adequacy of this aspect of nuclear power plant design.

As discussed in Title 10, Chapter 1, Code of Federal Regulations, § 50.34(a), in the Safety Analysis Report the applicant is required to determine margins of safety for both normal and abnormal operations and to determine "the adequacy of structures, systems, and components provided for prevention of accidents and the mitigation of the consequences of accidents." To assist the applicant in complying with this regulation, the NRC has published Regulatory Guide 1.70, Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants,<sup>1</sup> which describes the information to be provided in the Safety Analysis Report. In particular, section 15 of Regulatory Guide 1.70 provides guidance to an applicant concerning "design basis assumptions acceptable to the NRC for purposes of determining adequacy of the plant design to meet 10 CFR Part 100 criteria." Regulatory Guide 1.70 explains that these design basis assumptions can, for the most part, be found in regulatory guides that deal with radiological releases and suggests use of Regulatory Guides 1.3 and 1.4, Assumptions Used for Evaluation of the Potential Radiological Consequences of a Loss-of-Coolant Accident.<sup>1</sup> Regulatory Guide 1.70 further states that "This analysis should be referred to as the 'design basis analysis.'" Operating events corresponding to design basis assumptions are termed "design basis accidents," and satisfactory analysis conclusions concerning them allow a judgment that the facility can be operated without undue risk to the health and safety of the public.

It should be noted that these events are analyzed primarily for the purpose of establishing the adequacy of engineered safety features, such features being those structures, systems, and components, designed into a plant to mitigate the consequences of postulated design basis accidents, and which supplement other plant features designed to meet performance specifications for normal operations and anticipated abnormal conditions.

In the Safety Analysis Report the applicant is not required, however, to explicitly analyze accidents more severe than the design basis accidents.<sup>2</sup> This approach was based on the assumption that such accidents are of sufficiently low probability that mitigation of their consequences is not necessary for public safety. This low probability was thought to result from the "defense in depth" approach that requires conservative design, multiple physical barriers, quality assurance for design, manufacture and operation, and continued surveillance and testing to prevent such accidents.

Furthermore, in reviewing reactor plant designs using the "design basis accident" approach, the NRC does not review all structures, systems, and components but rather reviews, in varying levels of detail, only those considered "safety grade" by the applicant submitting a Safety Analysis Report. Items considered by the applicant to be outside the scope of design basis accident analyses are generally not considered to be "safety grade" and are not reviewed by the NRC to see whether they will perform as intended or meet various dependability criteria. This method of classification is based on the notion that things credited in the analysis of a design basis event or specified in the regulations are important to safety and thus are "safety grade" while all else is "non-safety grade." Non-safety grade items do not receive continuing regulatory supervision or surveillance to see that they are properly maintained or that their design is not changed in some way that might interact negatively with other systems. Instead, these items simply receive what attention may be dictated by routine industrial codes and by desires to enhance plant availability.

Historically, a further assumption in design review and licensing was that if reactor plant systems can handle large-scale design basis accidents, they can also handle a spectrum of smaller accidents that are regarded as being "within the design envelope."

The accident at Three Mile Island resulted in core damage more severe than that considered in current design

basis events<sup>4</sup> and has shown the need to re-examine these historical approaches to analyzing reactor plant design and plant accidents. The October 1979 Report of the President's Commission on the Accident at Three Mile Island<sup>5</sup> recommended that in-depth studies be initiated on the probabilities and consequences (onsite and offsite) of nuclear power plant accidents, including the consequences of core meltdown. This report recommended that these studies include a variety of small-break, loss-of-coolant accidents and multiple-failure accidents, with particular attention to human failures. The report stated that "from these studies may emerge desirable modifications in the design of plants that will help prevent accidents and mitigate their consequences. For example consideration should be given to equipment that would facilitate the controlled safe venting of hydrogen gas from the reactor cooling system," and "consideration should be given to overall gas-tight enclosure of the let-down/make-up system with the option of returning gases to the containment building."

Similarly, the January 1980 report, Three Mile Island, A Report to the Commissioners and to the Public,<sup>6</sup> states, "... we have come far beyond the point at which the existing, stylized design basis accident review approach is sufficient. The process is not good enough to pinpoint many important design weaknesses or to address all the relevant design issues. Some important accidents are outside or are not adequately assessed within the 'design envelope'; key systems are not 'safety related'; and integration of human factors into the design is grossly inadequate."

### Commission's Intentions

Accordingly, it is the Commission's intent to determine what changes, if any, in reactor plant designs and safety analyses are needed to take into account reactor accidents beyond those considered in the current design basis accident approach. Accidents under consideration include a range of loss-of-core-cooling, core damage, and core-melting events both inside and outside historical design envelopes. Furthermore, the Commission will

<sup>2</sup> There are other design requirements which would presuppose events where significant core damage and release of radioactive material has occurred. For example, radioactive source terms of Technical Information Document TID-14844, Calculation of Distance Factors for Power and Test Reactor Sites,<sup>3</sup> which imply a major reactor accident, are used to judge design adequacy of various engineered safety features and certain other plant systems and components.

<sup>3</sup> Available from National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22151.

<sup>1</sup> Available from the U.S. Nuclear Regulatory Commission, Washington, DC 20555.

<sup>4</sup> However, there was no release of fission products from the core more severe than that presumed in 10 CFR Part 100 or TID-14844.

<sup>5</sup> "The Need for Change: The Legacy of TMI," available from the U.S. Government Printing Office, Washington, D.C. 20402.

<sup>6</sup> Copies may be obtained from the GPO Sales Program, Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

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consider whether to require more coherent consideration of this range of core damage events in the design of both normal operating systems and engineered safety features. Therefore, this advance notice of proposed rulemaking is being published to provide the regulated industry and the public an opportunity to provide advice and recommendations to the Commission on what should be the content of a regulation requiring improvements to cope with degraded core cooling and with accidents not covered adequately by traditional design envelopes. The rulemaking proceeding will address the objectives of such a regulation, the design and operational improvements being considered, the effect on other safety considerations, and the costs of such design improvements compared to expected benefits.

Recognizing the need for prompt action to correct specific deficiencies identified during the Three Mile Island accident and subsequent investigations, the Commission is publishing a proposed interim rule that would require certain interim improvements to better cope with degraded reactor cores. That proposed interim rule should not be viewed as prejudging the final action concerning this advance notice of proposed rulemaking, and comments should be framed accordingly.

In addition to this **Federal Register Notice**, the Commission's Office of Standards Development is making a direct mailing to affected licensees and other known interested persons to ensure that they are aware of this advance notice of proposed rulemaking.

### Summary of Features Being Considered for Proposed Rule

The Commission is considering initiating rulemaking that would require that a broader range of accidents of both lesser and greater severity than the design basis accident, including a fully melted core, be considered in plant design, plant operation, and reactor safety analyses.

### Specific Considerations

Advice and recommendations on a proposed rule reflecting the foregoing feature and on any other points considered pertinent are invited from all interested persons. Comment is also invited on the extent to which any additional measures should be backfitted. Comments and supporting reasons are particularly requested on the following questions:

1. If loss of core cooling and resultant core damage occur in a nuclear power plant, there are certain predictable consequences. Can these consequences

be mitigated substantially, and the risk of severe public health danger thereby reduced substantially, by practicable design improvements? If not, why not, or, if so, what design improvements can be made and at what estimated cost? How would your recommendations affect other safety considerations?

2. The Three Mile Island accident was terminated after the core was damaged severely but before substantial melting occurred, a condition beyond the current design-basis-accident events considered in the safety analysis. Should the NRC require that events of this type be considered in future safety analyses? If not, why not, or, if so, what criteria would you impose to judge design acceptability?

3. Although the consequences of core-melt accidents have been considered to some extent in assessing nuclear power plant safety, such as in requirements for siting, emergency response plans, and certain engineered safety features, explicit consideration of the capability of current designs and casualty procedures to cope with core-melt accidents has not been a part of safety analysis scrutiny by the NRC. Should core-melt accidents be specifically evaluated in safety analysis reviews, and, if so, to what extent, or, if not, why not?

4. Recognizing that there can never be complete assurance that only analyzed events as delineated in a Safety Analysis Report will occur, what additional analyses, procedures, or design features you would propose to mitigate fuel damage accidents in the range from extensive clad perforation without oxidation, through a few percent clad oxidation, through extensive oxidation to full core meltdown? Would you recommend different and perhaps overlapping design features depending on the severity of core damage to be coped with?

5. To what extent should reactor design and reactor safety analysis account for engineered safety features not working at all, not working well, or being defeated by the operator, resulting in severe core damage? What limits should be placed on multiple failure and operator error assumptions made in safety analyses and how should probabilistic risk assessment be used to determine these limits?

6. Should the NRC require construction, at each nuclear reactor plant site, of a new structure for controlled filtered venting of the reactor containment structure? Would you limit the function of such a new structure to filtering particulates, elemental iodine, and inorganic iodine or would you include adsorption bed systems using

charcoal or other processes so that organic iodine and noble gases could also be trapped? What quantities and release rates of gases and particulates would you design such a structure to handle and at what removal efficiency and cost? Do the potential reductions in risk expected from such a structure offset potential increases in risk that may materialize from incidents such as inadvertent operation or the concentration of hydrogen in the filtering apparatus?

7. Should the NRC require incorporation into containment design, systems for controlling combustion of hydrogen? Do you favor methods of control that suppress combustion or do you favor controlled burning? If you favor suppression of combustion, what techniques would you recommend and should they vary as a function of the design capability of current containments? If you favor controlled burning, do you recommend open flames, spark plugs, catalytic combustors, or some other means? What percent of zirconium oxidation in the core and at what rate would you design for? Would you respond differently for different reactor or containment types? If so, what differences would you recommend?

8. Would you recommend that all nuclear power plants operate with a nitrogen-enriched containment atmosphere as some BWR plants currently do? Why or why not and, if not, to which types of containment, if any, would you limit required nitrogen enrichment?

9. Should the NRC require incorporation into containment design, a core retention system to mitigate the consequences of core meltdown by, for example, increasing resistance to molten core debris penetration and thereby substantially reducing gas, vapor and aerosol generation to less than that which occurs when core debris is allowed to interact with concrete? Assuming a core retention system is required, do you favor a device that delays melt-through of the containment basemat, or a device that permanently retains core debris within the containment building? If you favor delay of core melt-through, do you recommend refractory materials (such as  $MgO$ ,  $ZrO_2$ ) to protect the containment concrete basemat, or do you recommend some other means? If you favor permanent retention of core debris, do you recommend using refractory materials in combination with cooling systems that rely either on natural convective cooling or forced pumping of coolant around the extremities of the



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refractory material, or do you recommend some other concept? Would you respond differently for different containment types? If so, what differences would you recommend? How do your recommendations affect other safety considerations?

10. Should the NRC require design changes to account for increased radioactive material that may be transported during an accident by systems normally functioning with much lower levels of radioactivity such as the steam and residual heat removal systems and the containment drainage system?

11. Should the NRC require more extensive operator training, strict literal compliance with new and improved detailed operating procedures, increased reliability of emergency cooling or decay heat removal capability, and expanded control room minimum manning as alternatives or supplements to degraded cooling design improvements?

12. Should the NRC require an alternate, add-on, self-contained decay heat removal system to prevent degradation of the core or to cool a degraded core, in contrast to the previously discussed schemes which are aimed toward mitigating the consequences of degraded core cooling? How would such a decay heat removal system affect other safety considerations?

13. Should the NRC require systems such as the makeup and purification systems to be located in a leak-tight building? Would such a requirement add to or detract from overall plant safety?

14. What design, quality and seismic criteria would you recommend for any additional systems to prevent the potential breaching of containment such as systems for controlled filtered venting, hydrogen combustion control, and core retention mentioned in previous questions? Do you favor evaluating designs of such systems on a realistic basis, as opposed to the conservative method used to evaluate engineered safety features? Do you favor establishing design criteria for such systems that are equally stringent, less stringent, or more stringent than those applied to engineered safety features? Please explain your response in terms of criteria you would recommend, including consideration of redundancy, diversity, testability, inspectability, and structural design limits (including seismic requirements).

15. Can probabilistic analysis be used both as an aid in determining and comparing the adequacy and usefulness of the several features mentioned in previous questions and as an aid in determining the design criteria and

reliability requirements for these features? How do you view the utility of quantitative risk analysis in better understanding the safety advantages and disadvantages of the several features mentioned in previous questions?

16. In weighing the costs of design and operational improvements to cope with degraded core cooling against the benefits of their use, what quantitative methods or other guidance would you suggest to facilitate preparation of a useful value-impact assessment? Would you consider useful or appropriate comparisons between nuclear power plant risks and other risks to which people are exposed?

17. What aspects of degraded cooling or melted-core accidents are sufficiently unknown or uncertain as to impede design and analysis of mitigating systems, thus requiring additional research or experimentation?

18. The NRC has under way a separate rulemaking proceeding concerning reactor siting and an emergency planning rule has recently been approved. If you are familiar with these separate activities, how would you modify present and proposed requirements for emergency planning and reactor siting if accidents beyond the present design basis were to be considered in nuclear power plant safety analyses?



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tion facilities or activities of the type subject to licensing pursuant to section 202 of the Energy Reorganization Act of 1974 are involved,<sup>10</sup> any prime contractor of the \*\* Department is exempt from the requirements for a license set forth in section 53 of the Act and from the regulations in this part to the extent that such contractor, under his prime contract with the \*\* Department receives title to, owns, acquires, delivers, receives, possesses, uses, or transfers† special nuclear material for:

(a) The performance of work for the \*\* Department at a United States Government-owned or controlled site, including the transportation of special nuclear material to or from such site and the performance of contract services during temporary interruptions of such transportation; (b) research in, or development, manufacture, storage, testing or transportation of, atomic weapons or components thereof; or (c) the use or operation of nuclear reactors or other nuclear devices in a United States Government-owned vehicle or vessel. In addition to the foregoing exemptions, and subject to the requirement for licensing of \*\* Department facilities and activities pursuant to section 202 of the Energy Reorganization Act of 1974, any prime contractor or subcontractor of the \*\* Department or the Commission is exempt from the requirements for a license set forth in section 53 of the Act and from the regulations in this part to the extent that such prime contractor or subcontractor receives title to, owns, acquires, delivers, receives, possesses, uses, or transfers† special nuclear material under his prime contract or subcontract when the Commission determines that the exemption of the prime contractor or subcontractor is authorized by law; and that, under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without

undue risk to the public health or safety.

### § 70.12 Carriers.

Common and contract carriers, freight forwarders, warehousemen, and the U.S. Postal Service are exempt from the regulations in this part to the extent that they transport or store special nuclear material in the regular course of carriage for another or storage incident thereto. The exemption in this section applies to shipments of formula quantities of strategic special nuclear material made through the United States from a point of foreign origin to a foreign destination, unless such a shipment or a portion thereof is offloaded for any purpose within the United States, when the general license under § 70.20a of this section shall apply. This exemption does not apply to the transport or storage in transit of formula quantities of strategic special nuclear material subject to the requirements of Part 73 of this chapter.

### § 70.13 Department of Defense.

The regulations in this part do not apply to the Department of Defense to the extent that the Department receives, possesses and uses special nuclear material in accordance with the direction of the President pursuant to section 91 of the Act.

### § 70.14 Specific exemptions.

(a) The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

(b) Reserved.

<sup>10</sup>The \*\* Department facilities identified in section 202 are:

(1) Demonstration Liquid Metal Fast Breeder reactors when operated as part of the power generation facilities of an electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such a reactor.

(2) Other demonstration nuclear reactors, except those in existence on January 19, 1975, when operated as part of the power generation facilities of an electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such a reactor.

(3) Facilities used primarily for the receipt and storage of high-level radioactive wastes resulting from licensed activities.

(4) Retrievable Surface Storage Facilities and other facilities authorized for the express purpose of subsequent long-term storage of high-level radioactive waste generated by the \*\* Department which are not used for, or are part of, research and development activities.

§ 70.15 [Deleted 43 FR 6915.]

### GENERAL LICENSES

### § 70.18 Types of licenses.

Licenses for special nuclear material are of two types: general and specific. Any general license provided in this part is effective without the filing of applications with the Commission or the issuance of licensing documents to particular persons. Specific licenses are issued to named persons upon applications filed pursuant to the regulations in this part.

### § 70.19 General license for calibration or reference sources.

(a) A general license is hereby issued to those persons listed below to \* receive title to, own, acquire, deliver, receive, possess, use and transfer, in accordance with the provisions of paragraphs (b) and (c) of this section, plutonium in the form of calibration or reference sources:

(1) Any person in a non-Agreement State who holds a specific license issued by the Commission or the Atomic

Energy Commission which authorizes him to receive, possess, use and transfer byproduct material, source material, or special nuclear material;

(2) Any Government agency, as defined in § 70.4(f), which holds a specific license issued by the Commission or the Atomic Energy Commission which authorizes it to receive, possess, use and transfer byproduct material, source material, or special nuclear material; and

(3) Any person in an Agreement State who holds a specific license issued by the Commission or the Atomic Energy Commission which authorizes him to receive, possess, use and transfer special nuclear material.

(b) The general license in paragraph (a) of this section applies only to calibration or reference sources which have been manufactured or initially transferred† in accordance with the specifications contained in a specific license issued† pursuant to § 70.39 or in accordance with

\* Amended 32 FR 8124.

† Amended 43 FR 6915.

\*\* Amended 45 FR 65521

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dance with the specifications contained in a specific license issued ‡ by an Agreement State

which authorizes manufacture of the sources for distribution to persons generally licensed by the Agreement State.

(c) The general license in paragraph (a) of this section is subject to the provisions of §§ 70.32, 70.51, 70.52, 70.55, 70.56, 70.61, 70.62, and 70.71, and to the provisions of Parts 19, 20, and 21† of this chapter. In addition persons who \*receive title to, own, acquire, deliver, receive, possess, use or transfer one or more calibration or reference sources pursuant to this general license:

(1) Shall not possess at any one time, at any one location of storage or use, more than 5 microcuries of plutonium in such sources;

(2) Shall not receive, possess, use or transfer such source unless the source, or the storage container, bears a label which includes the following statement or a substantially similar statement which contains the information called for in the following statement:†

The receipt, possession, use and transfer of this source, Model \_\_\_\_\_, Serial No. \_\_\_\_\_, are subject to a general license and the regulations of the United States Nuclear Regulatory Commission or of a State with which the Commission has entered into an agreement for the exercise of regulatory authority. Do not remove this label.

CAUTION—RADIOACTIVE  
MATERIAL—THIS SOURCE CONTAINS  
PLUTONIUM DO NOT TOUCH  
RADIOACTIVE PORTION OF THIS  
SOURCE

(Name of Manufacturer or initial transferor)\*

(3) Shall not transfer, abandon, or dispose of such source except by transfer to a person authorized by a license from the Commission or the Atomic Energy Commission or an Agreement State to receive the source.

(4) Shall store such source, except when the source is being used, in a closed container adequately designed and constructed to contain plutonium which might otherwise escape during storage.

(5) Shall not use such source for any purpose other than the calibration of radiation detectors or the standardization of other sources.

(d) The general license in paragraph (a) of this section does not authorize the manufacture, import, or export of calibration or reference sources containing plutonium.

\* Amended 32 FR 8124.

† Amended 42 FR 28891.

‡ Amended 43 FR 6915.

### § 70.20 General license to own special nuclear material.

A general license is hereby issued to receive title to and own special nuclear material without regard to quantity. Notwithstanding any other provision of this chapter, a general licensee under this section is not authorized to acquire, deliver, receive, possess, use, transfer, import, or export special nuclear material, except as authorized in a specific license.

#### § 70.20a General license to possess special nuclear material for transport.

(a) A general license is hereby issued to any person to possess formula quantities of strategic special nuclear material of the types and quantities subject to the requirements of §§ 73.20, 73.25, 73.26, 73.27 and 73.70(g) of Part 73 of this chapter, in the regular course of carriage for another or storage incident thereto. The general license is subject to the applicable provisions of §§ 70.32 (a) and (b), 70.42, 70.52, 70.55, 70.61, 70.62 and 70.71.

(b) Notwithstanding any other provision of this chapter, the general license issued under this section does not authorize any person to conduct any activity that would be authorized by a license issued pursuant to Parts 30 through 35, 40, 50, 110, or other sections of this part.

(c) Notwithstanding any other provision of this chapter, the duties of a general licensee under this section while in possession of formula quantities of strategic special nuclear material in the regular course of carriage for another or storage incident thereto shall be limited to providing for the physical protection of such material against theft or sabotage. Unless otherwise provided by this section, a general licensee under this section is not subject to the requirements of Parts 19, 20, 70, and 73.

(d) Any person who possesses formula quantities of strategic special nuclear material under this general license:

(1) shall have submitted and received approval of a transportation security plan. The security plan shall outline the procedures that will be used to meet the requirements of §§ 73.20, 73.25, 73.26, 73.27 and 73.70(g) of this chapter including a plan for the selection, qualification, and training of armed escorts, or the specification and design of a specially designed truck or trailer as appropriate.

(2) shall assure that the transportation is in accordance with the applicable physical protection requirements of §§ 73.20, 73.25, 73.26, 73.27 and 73.70(g) of Part 73 of this chapter and the applicable approved transportation

security plan.

(3) shall be subject to § 73.80 of Part 73 of this chapter.

29 FR 5883

44 FR 26850



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### § 70.23 Requirements for the approval of applications.

(a) An application for a license<sup>†</sup> will be approved if the Commission determines that:

(1) The special nuclear material is to be used for the conduct of research or development activities of a type specified in section 31 of the Act,<sup>3</sup> in activities licensed by the Commission under section 103 or 104 of the Act, or for such other uses as the Commission determines to be appropriate to carry out the purposes of the Act;

(2) The applicant is qualified by reason of training and experience to use the material for the purpose requested in accordance with the regulations in this chapter;

(3) The applicant's proposed equipment and facilities are adequate to protect health and minimize danger to life or property;

(4) The applicant's proposed procedures to protect health and to minimize danger to life or property are adequate;

(5) Where the nature of the proposed activities is such as to require consideration by the Commission, that the applicant appears to be financially qualified to engage in the proposed activities in accordance with the regulations in this part;

(6) Where the applicant is required to submit a summary description of the fundamental material controls provided in his procedures for the control of and accounting for special nuclear material pursuant to § 70.22(b)(2), the applicant's proposed controls are adequate;

(7) Where the proposed activity is processing and fuel fabrication, scrap recovery, conversion of uranium hexafluoride, commercial waste disposal by land burial, or any other activity which the Commission determines will significantly affect the quality of the environment, the Director of Nuclear Material Safety and Safeguards or his designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made pursuant to Part 51 of this chapter, has concluded, after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available

alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values.

Commencement of construction prior to such conclusions shall be grounds for denial to possess and use special nuclear material in such plant or facility. As used in this paragraph the term "commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the environment of a site. The term does not mean site exploration, necessary roads for site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the site or the protection of environmental values

<sup>3</sup> The types of research and development activities specified in section 31 are those relating to:

- (1) Nuclear processes;
- (2) The theory and production of atomic energy, including processes, materials, and devices related to such production;
- (3) Utilization of special nuclear material and radioactive material for medical, biological, agricultural, health or military purposes;
- (4) Utilization of special nuclear material, atomic energy, and radioactive material and processes entailed in the utilization or production of atomic energy or such material for all other purposes, including industrial use, the generation of usable energy, and the demonstration of the practical value of utilization or production facilities for industrial or commercial purposes; and
- (5) The protection of health and the promotion of safety during research and production activities.

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program provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents.<sup>3</sup> Failure to obtain Commission approval prior to beginning of such construction may be grounds for denial of a license to process and use special nuclear material in a plutonium processing and fuel fabrication plant.

### § 70.24 Criticality accident requirements.

(a) Each licensee authorized to possess special nuclear material in a quantity exceeding 700 grams of contained uranium-235, 520 grams of uranium-233, 450 grams of plutonium, 1,500 grams of contained uranium-235 if no uranium enriched to more than 4 percent by weight of uranium-235 is present, 450 grams of any combination thereof, or one-half such quantities if massive moderators or reflectors made of graphite, heavy water or beryllium may be present, shall maintain in each area in which such licensed special nuclear material is handled, used, or stored, a monitoring system meeting the requirements of either paragraph (a) (1) or (a) (2), as appropriate, and using gamma- or neutron-sensitive radiation detectors which will energize clearly audible alarm signals if accidental criticality occurs.

*This section is not intended to require underwater monitoring when special nuclear material is handled or stored beneath water shielding or to require monitoring systems when special nuclear material is being transported when packaged in accordance with the requirements of Part 71 of this chapter.*

(1) The monitoring system shall be capable of detecting a criticality that produces an absorbed dose in soft tissue of 20 rads of combined neutron and gamma radiation at an unshielded distance of 2 meters from the reacting material within one minute. Coverage of all areas shall be provided by two detectors.

(2) Persons licensed prior to December 6, 1974, to possess special nuclear material subject to this section may maintain a monitoring system capable of detecting a criticality which generates radiation levels of 300 rems per hour one foot from the source of the radiation. The monitoring devices in the system shall have a preset alarm point of not less than 5 millirems per hour (in order to avoid false alarms) nor more than 20 millirems per hour. In no event may any

such device be farther than 120 feet from the special nuclear material being handled, used, or stored; lesser distances may be necessary to meet the requirements of this paragraph (a) (2) on account of intervening shielding or other pertinent factors.

(3) Emergency procedures for each area in which such licensed special nuclear material is handled, used or stored shall be maintained to assure that all personnel withdraw to an area of safety upon the sounding of the alarm. These procedures shall include the conduct of drills to familiarize personnel with the evacuation plan, plans and designation of responsible individuals for determining the cause of the alarm, and placement of radiation survey instruments in accessible locations for use in such an emergency.

(b) Each licensee authorized to possess special nuclear material in quantities in excess of those specified in paragraph (a) shall:

(1) Provide the means for identifying quickly which individuals have received doses of 10 rads or more.

(2) Maintain facilities and supplies at the site for decontamination of personnel, arrangements for the services of a physician and other medical personnel qualified to handle radiation emergencies, arrangements for transportation of injured or contaminated individuals to treatment facilities, and arrangements for treatment of individuals at treatment facilities outside the site boundary.

(c) Holders of licenses for construction or operation of a nuclear reactor issued pursuant to Part 50 of this chapter, except critical assembly reactors, are exempt from the requirements of paragraph (b) of this section with respect to special nuclear material used or to be used in the reactor.

(d) Any licensee who believes that good cause exists why he should be granted an exemption in whole or in part from the requirements of this section may apply to the Commission for such exemption. Such application shall specify his reason for the relief requested.

## LICENSES

### § 70.31 Issuance of licenses.

(a) Upon a determination that an application meets the requirements of the act, and of the regulations of the Commission, the Commission will issue a license in such form and containing such conditions and limitations as it deems appropriate or necessary to effectuate the purposes of the act.

(b) [Deleted 32 FR 4055.]

(8) Where the proposed activity is the operation of a plutonium processing and fuel fabrication plant, construction of the principal structures, systems, and components approved pursuant to paragraph (b) of this section has been completed in accordance with the application.

(9) Where the applicant is required to submit a plan for physical protection of special nuclear material in transit pursuant to § 70.22(g), of this chapter, the applicant's plan is adequate.

(10) Where the applicant is required to submit a physical security plan pursuant to § 70.22(h), the applicant's proposed plan is adequate.

(11) Where the proposed activity is processing and fuel fabrication, scrap recovery, or conversion of uranium hexafluoride, the applicant's proposed emergency plans are adequate.<sup>4</sup>

(b) The Commission will approve construction of the principal structures, systems, and components of a plutonium processing and fuel fabrication plant on the basis of information filed pursuant to § 70.22(f) when the Commission has determined that the design bases of the principal structures, systems, and components, and the quality assurance

<sup>4</sup> Elements listed in Section IV, "Content of Emergency Plans," in 10 CFR Part 50 of this chapter will be used by the Commission in determining the adequacy of such plans.

\*\*Amended 39 FR 26279.

<sup>3</sup> The criteria in Appendix B of Part 50 of this chapter will be used by the Commission in determining the adequacy of the quality assurance program.

## PART 150 • EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY...

(b) Notwithstanding any exemptions provided in this part, the Commission may from time to time by rule, regulation, or order, require that the manufacturer, processor or producer of any equipment, device, commodity, or other product containing source, byproduct, or special nuclear material shall not transfer possession or control of such product except pursuant to a license or an exemption from licensing issued by the Commission.

### § 150.15a Continued Commission authority pertaining to byproduct material.

(a) Prior to the termination of any Agreement State license for byproduct material as defined in § 150.3(c)(2) of this Part, or for any activity that results in the production of such material, the Commission shall have made a determination that all applicable standards and requirements pertaining to such material have been met.

(b) After November 8, 1981, the Commission reserves the authority to establish minimum standards regarding reclamation, long term surveillance (i.e., continued site observation, monitoring and, where necessary, maintenance), and ownership of byproduct material as defined in § 150.3(c)(2) of this Part and of land used as a disposal site for such material. Such reserved authority includes:

(1) Authority to establish such terms and conditions as the Commission determines necessary to assure that, prior to termination of any license for byproduct material as defined in § 150.3(c)(2) of this Part, or for any activity that results in the production of such material, the licensee shall comply with decontamination, decommissioning, and reclamation standards prescribed by the Commission; and with ownership requirements for such materials and its disposal site;

(2) The authority to require that prior to termination of any license for byproduct material as defined in

§ 150.3(c)(2) of this Part, or for any activity that results in the production of such material, that title to such byproduct material and its disposal site be transferred to the United States or the State in which such material and land is located, at the option of the State (provided such option is exercised prior to termination of the license);

(3) The authority to permit use of the surface or subsurface estates, or both, of the land transferred to the United States or a State pursuant to paragraph (b)(2) of this section in a manner consistent with the provisions of the Uranium Mill Tailings Radiation Control Act of 1978, provided that the Commission determines that such use would not endanger the public health, safety, welfare, or the environment;

(4) The authority to require, in the case of a license for any activity that produces such byproduct material (which license was in effect on November 8, 1981) transfer of land and material pursuant to paragraph (b)(2), of this section, taking into consideration the status of such material and land and interests therein, and the ability of the licensee to transfer title and custody thereof to the United States or a State.

(5) The authority to require the Secretary of the Department of Energy, other Federal agency, or State, whichever has custody of such property and materials, to undertake such monitoring, maintenance and emergency measures as are necessary to protect the public health and safety and other actions at the Commission deems necessary to comply with the standards promulgated pursuant to the Uranium Mill Tailings Radiation Control Act of 1978; and

(6) The authority to enter into arrangements as may be appropriate to assure Federal long term surveillance (i.e., continued site observation, monitoring, and where necessary, maintenance) of such disposal sites on land held in trust by the United States for any Indian tribe or land owned by an Indian tribe and subject to a restriction against alienation imposed by the United States.

### § 150.16 Submission to Commission of nuclear material transfer reports.

(a) Each person who transfers and each person who receives special nuclear material pursuant to an Agreement State license shall complete and distribute Nuclear Material Transaction Reports on Form NRC-741, in accordance with printed instructions for completing the form, whenever he transfers or receives a quantity of special nuclear material of 1 gram or more of contained uranium-235, uranium-233, or plutonium.

Each person who transfers such material shall submit a copy of Form NRC-741 to the U.S.

\*\*\* Department of Energy, , P.O. Box E, Oak Ridge, Tennessee 37830, and three (3) copies to the receiver of the material promptly after the transfer takes place. Each person who receives special nuclear material shall submit a copy of Form NRC-741 to the U.S.

\*\*\* Department of Energy  
istration and the the shipper of the material within ten (10) days after the special nuclear material is received.

(b) Each person who, pursuant to an Agreement State License, possesses 1 gram or more of contained uranium-235, uranium-233, or plutonium shall report immediately † to the Director of the appropriate Inspection and Enforcement Regional Office, listed in Appendix A of Part 73 of this chapter, by telephone\*\*

† Amended 41 FR 16445.

\*\* Amended 42 FR 43965.

\*\*\* Amended 45 FR 14199

# PART 150 • EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY...

any theft or other unlawful diversion of special nuclear material which he is licensed to possess or any incident in which an attempt has been made, or is believed to have been made, to commit a theft or unlawful diversion of such material.

The initial report shall be followed within a period of fifteen (15) days by a written report submitted to the appropriate NRC Regional Office shown in Appendix A of Part 73 of this chapter, which sets forth the details of the incident. Copies of such written report shall be sent to the Director of Inspection and Enforcement, U. S. Nuclear Regulatory Commission, Washington, D.C. 20555.

Subsequent to the submission of the written report required by this paragraph, each licensee shall promptly inform the Director of the appropriate Inspection and Enforcement Regional Office by means of a written report of any substantive additional information, which becomes available to such person, concerning an attempted or apparent theft or unlawful diversion of special nuclear material.

## 150.17 Submission to Commission of source material transfer reports.

(a) Except as specified in paragraph (d) of this section, each person who, pursuant to an Agreement State License, transfers or receives at any one time 1,000 kilograms or more of uranium or thorium, or any combination thereof, shall complete and distribute a Nuclear Material Transaction Report on Form NRC-741, in accordance with the printed instructions for completing the form.

Each person who transfers such material shall submit a complete copy of Form NRC-741 to the U.S.

\*\*\* Department of Energy,

P.O. Box E, Oak Ridge, Tennessee 37830, and three (3) copies to the receiver of the material promptly after the transfer takes place. Each person who receives such material shall submit a complete copy of Form NRC-741 to the U.S.

\*\*\* Department of Energy and to the shipper of the material within ten (10) days after the material is received.

(b) Except as specified in paragraph (d) of this section, each person who is authorized to possess at any one time and location, pursuant to an Agreement State license, more than 1,000 kilograms of uranium or thorium, or any combination thereof, shall submit to the Commission within thirty (30) days after September 30<sup>th</sup> of each year a statement of his source material inventory. The reports shall be submitted to the U.S.

\*\*\* Department of Energy,

Post Office Box E, Oak Ridge, Tenn. 37830, and shall include the Reporting Identification Symbol (RIS) assigned by the Commission to such person.

(c) Except as specified in paragraph (d) of this section, each person who is authorized to possess uranium or thorium pursuant to a specific license from an Agreement State shall report promptly to the appropriate NRC Regional Office shown in Appendix D of Part 20 of this chapter by telephone and telegraph, mailgram, or facsimile any incident in which an attempt has been made or is believed to have been made to commit a theft or unlawful diversion of more than 15 pounds of such material at any one time or more than 150 pounds of such material in any one calendar year. The initial report shall be followed within a period of fifteen (15) days by a written report submitted to the appropriate NRC Regional Office which sets forth the details of the incident and its consequences. Copies of such written report shall be sent to the Director of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Subsequent to the submission of the written report required by this paragraph, each person subject to the provisions of this paragraph, shall promptly inform the appropriate NRC Regional Office by means of a written report of any substantive additional information, which becomes available to such person, concerning an attempted or apparent theft or unlawful diversion of source material.

(d) The reports described in paragraphs (a), (b), and (c) of this section are not required for

(1) Processed ores containing less than

five (5) percent of uranium or thorium, or any combination thereof, by dry weight;

(2) Thorium contained in magnesium-thorium and tungsten-thorium alloys, provided that the thorium content in the alloys does not exceed 4 percent by weight; or

(3) Chemical catalysts containing uranium depleted in U<sup>235</sup> isotope to 0.4 percent or less, provided that the uranium content of the catalyst does not exceed 15 percent by weight.

## § 150.17a Compliance with requirements of US/IAEA safeguards agreement.

(a) For purposes of this section, the terms "effective kilogram", "ore processing", "installation", and "United States eligible list" have the meaning set forth in § 75.4 of this chapter.

(b) Each person who, pursuant to an Agreement State License, is authorized to possess source material in amounts greater than one effective kilogram (except in ore processing) is subject to the provisions of Part 75 of this chapter and shall comply with its applicable provisions. However, with respect to such persons, the Commission will issue orders under section 274m. of the Act instead of making license amendments; and, to the extent Part 75 refers to license amendments and license conditions, such references shall be deemed, for purposes of this paragraph, to refer to orders under section 274m. of the Act.

(c) An applicant for an Agreement State License authorizing possession of source material in amounts greater than one effective kilogram (except in ore processing) shall file with the Commission, at least 9 months prior to the date when the applicant desires to receive such source material or earlier upon request by the Commission, the installation information described in § 75.11 of this chapter (except that in the case of applicants who desire to receive the source material within 9 months after the effective date of this section, the installation information shall be submitted as soon as possible) and the applicant shall permit verification by the International Atomic Energy Agency and take such other action as may be necessary to implement the US/IAEA Safeguards Agreement, in the manner set forth in §§ 75.8, 75.11-75.14 of this chapter. The Commission will grant an exemption from this requirement, upon application, if it determines that the installation will not be included on the United States eligible list.

\* Amended 38 FR 2330.

† Amended 42 FR 33265.



## PART 150 • EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY...

### § 150.18 Control and accounting procedures for tritium.

(a) Except as specified in paragraph (b) of this section, each person who, pursuant to an Agreement State License, is authorized to possess at any one time and location more than 10,000 curies of tritium shall establish and maintain written material control and accounting procedures which are sufficient to enable such person to account for the tritium in his possession under specific license.

The written material control and accounting procedures shall be maintained as long as the licensee of the Agreement State retains possession of the tritium and for two years following transfer or export of the tritium. Records which must be maintained pursuant to this part may be the original or a reproduced copy or microform if such reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after prolonged storage.

(b) Written material control and accounting procedures are not required for tritium contained in spent fuel.

### § 150.19 Submission to Commission of tritium reports.

(a) Except as specified in paragraph (d) of this section, each person who, pursuant to an Agreement State license, transfers or receives at any one time 1,000 curies or more of tritium shall complete and distribute a Nuclear Material Transaction Report on Form NRC-741, in accordance with the printed instructions for completing the form.

Each person who transfers such material shall submit a completed copy of Form NRC-741 to the U.S.

\*\* Department of Energy

P.O. Box E, Oak Ridge, Tennessee 37830, and three (3) copies to the receiver of the material promptly after the transfer takes place. Each person who

receives such material shall submit a completed copy of Form NRC-741 to the U.S. \*\* Department of Energy and to the shipper of the material within ten (10) days after the material is received.

(b) Except as specified in paragraph (d) of this section, each person who, pursuant to an Agreement State license, is authorized to possess at any one time and location more than 10,000 curies of tritium shall submit to the Commission within thirty (30) days after March 31 and September 30<sup>th</sup> of each year a statement of his tritium inventory to the nearest hundredth of a gram calculated at 10,000 curies per gram. The reports shall be submitted to the U.S.

\*\* Department of Energy

Post Office Box E, Oak Ridge, TN 37830, and shall include the Reporting Identification Symbol (RIS) assigned by the Commission to such person.

(c) Except as specified in paragraph (d) of this section, each person who, pursuant to an Agreement State license, is authorized to possess tritium shall report promptly to the appropriate NRC Regional Office as shown in Appendix D of Part 20 of this chapter by telephone and telegraph, mailgram, or facsimile any incident in which an attempt has been made or is believed to have been made to commit a theft or unlawful diversion of more than 10 curies of such material at any one time or 100 curies of such material in any one calendar year. The initial report shall be followed within a period of fifteen (15) days by a written report submitted to the appropriate NRC Regional Office which sets forth the details of the incident and its consequences. Copies of such written report shall be sent to the Director of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Subsequent to the submission of the written report required by this paragraph, each person subject to the provisions of this paragraph shall promptly inform the appropriate NRC Regional Office by means of a written report of any substantive additional information, which becomes available to such person, concerning an attempted or apparent theft or unlawful diversion of tritium.

(d) The reports described in this section are not required for tritium possessed pursuant to a general license issued pursuant to regulations of an Agreement State equivalent to Part 31 of this chapter or for tritium in spent fuel.

### RECIPROCITY

### § 150.20 Recognition of Agreement State licences.

(a) Subject to the provisions of paragraph (b) of this section, any person who holds a specific license from an Agreement State where the licensee maintains an office for directing the licensed activity and at which radiation safety records are normally maintained, is hereby granted a general license to conduct the same activity in non-Agreement States: *Provided*, That the specific license does not limit the activity authorized by the license to specified installations or locations.

(b) Notwithstanding any provision to the contrary in any specific license issued by an Agreement State to a person who engages in activities in a non-Agreement State under a general license provided in this section is subject to the provisions of §§ 30.14(d), 30.34, 30.41, and 30.51 to 30.63 inclusive of Part 30 of this chapter; §§ 40.41, 40.51, 40.61 to 40.63 inclusive, 40.71, and 40.81 of Part 40 of this chapter; and §§ 70.32, 70.42, 70.51 to 70.56 inclusive, 70.61, 70.62, and 70.71 of Part 70 of this chapter; and to the provisions of Parts 19, 20, and 71 and Subpart B of Part 34 of this chapter. In addition any person who engages in activities in non-Agreement States under a general license provided in this section:

(1) Shall, at least 3 days prior to engaging in each such activity, file four copies of Form NRC-241 (revised), "Report of Proposed Activities in Non-Agreement States," and four copies of his Agreement State specific license with the Director of the Nuclear Regulatory Commission Inspection and Enforcement Regional Office listed in Appendix D of Part 20 of this chapter for the region in which the Agreement State that issued the specific license is located. The Director of the Nuclear Regulatory Commission Inspection and Enforcement Regional Office may authorize such person to commence the activity upon notifi-

\* Amended 38 FR 2330.

\*\* Amended 45FR14199

‡ Amended 42 FR 33265.

## PART 150 • EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY...

cation by telephone of intent to conduct the proposed activity under the general license: *Provided, however,* That four copies of Form NRC-241 (revised) and four copies of the Agreement State license shall be filed within 3 days after the telephone notification. The Director of the Nuclear Regulatory Commission Inspection and Enforcement Regional Office may waive the requirement for filing additional Forms NRC-241 (revised) during the remainder of the calendar year following the receipt of the initial Form NRC-241 (revised) from a person engaging in activities under the general license provided in this section;

(2) Shall not, in any non-Agreement State transfer or dispose of radioactive material possessed or used under the general license provided in this section except by transfer to a person (i) specifically licensed by the Commission to receive such material, or (ii) exempt from the requirements for a license for such material under § 30.14 of this chapter;

(3) Shall not possess or use radioactive material, or engage in the activities authorized in paragraph (a) of this section for more than 180 days in any calendar year;

(4) Shall comply with all terms and conditions of the specific license issued by an Agreement State except such terms or conditions as are contrary to the requirements of this section.

### § 150.21 Transportation of special nuclear material by aircraft.

Except as specifically approved by the Commission no shipment of special nuclear material in excess of 20 grams or 20 curies whichever is less of plutonium or uranium-233 shall be made by a licensee of an Agreement State in passenger aircraft.

## ENFORCEMENT

### § 150.30 Violations.

An injunction or other court order may be obtained prohibiting any violation of any provision of the Act or any regulation or order issued thereunder. A court order may be obtained for the payment of a civil penalty imposed pursuant to section 234 of the Act for violation of section 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Act or any rule, regulation, or order issued thereunder, or any term, condition, or

limitation of any license issued thereunder, or for any violation for which a license may be revoked under section 186 of the Act. Any person who willfully violates any provision of the Act or any regulation or order issued thereunder may be guilty of a crime and upon conviction, may be punished by fine or imprisonment or both, as provided by law.

### § 150.31 Requirements for Agreement State regulation of byproduct material.

(a) Prior to November 8, 1981, in the licensing and regulation of byproduct material, as defined in § 150.3(c)(2) of this Part, or of any activity which results in the production of such byproduct material, an Agreement State shall require compliance with the requirements in Appendix A of 10 CFR 40 of this Chapter to the maximum extent practicable.

(b) After November 8, 1981, in the licensing and regulation of byproduct material, as defined in § 150.3(c)(2) of this Part, or of any activity which results in the production of such byproduct material, an Agreement State shall require:

(1) Compliance with requirements in Appendix A of 10 CFR 40 of this Chapter established by the Commission pertaining to ownership of such byproduct material and disposal sites for such material; and

(2) Compliance with standards which shall be adopted by the Agreement State for the protection of the public health, safety, and the environment from hazards associated with such material which are equivalent, to the extent practicable, or more stringent than, standards in Appendix A of 10 CFR 40 of this Chapter adopted and enforced by the Commission for the same purposes, including requirements and standards subsequently promulgated by the Commission and the Administrator of the Environmental Protection Agency pursuant to the Uranium Mill Tailings Radiation Control Act of 1978; and

(3) Compliance with procedures which:

(i) In the case of licenses, under State law include:

(A) An opportunity, after public notice, for written comments and a public hearing, with a transcript;

NOTE.—The reporting and record keeping requirements contained in this part have been approved by the General Accounting Office under B-180225 (R0040), (R0078), (R0414).

(B) An opportunity for cross examination; and

(C) A written determination by the appropriate State official which is based upon findings included in such determination and upon the evidence presented during the public comment period and which is subject to judicial review;

(ii) In the case of rulemaking, provide an opportunity for public participation through written comments or a public hearing and provide for judicial review of the rule;

(iii) Require for each licensing action which has a significant impact on the human environment a written analysis by the appropriate State agency (which shall be available to the public before the commencement of any such proceedings) of the impact of such licensing action, including any activities conducted pursuant thereto, on the environment. Such analysis shall include:

(A) An assessment of the radiological and nonradiological impacts to the public health of the activities to be conducted pursuant to such licenses;

(B) An assessment of any impact on any waterway and groundwater resulting from such activities;

(C) Consideration of alternatives, including alternative sites and engineering methods, to the activities to be conducted pursuant to such license; and

(D) Consideration of the long term impacts, including decommissioning, decontamination, and reclamation impacts associated with activities to be conducted pursuant to such license, including the management of any byproduct material, as defined in § 150.3(c)(2) of this Part; and

(iv) Prohibit any major construction activity with respect to such material prior to complying with the provisions of paragraph (c)(3) of this section. As used in this paragraph the term "major construction activity" means any clearing of land, excavation, or other substantial action that would adversely affect the environment of a site. The term does not mean site exploration, necessary roads for site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the site or the protection of environmental values.

(c) No Agreement State shall be required under paragraph (b) to conduct proceedings concerning any license or regulation which would duplicate proceedings conducted by the Commission.

## PART 150 • EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY...

### § 150.32 Funds for reclamation or maintenance of byproduct material.

(a) The total amount of funds an Agreement State collects, pursuant to a license for byproduct material as defined in § 150.3(c)(2) of this Part or for any activity that results in the production of such material, for reclamation or long term maintenance and monitoring of such material, shall after November 8, 1981, be transferred to the United States if title and custody of such material and its disposal site is transferred to the United States upon termination of such license. Such funds include, but are not limited to, sums collected for long term surveillance (i.e., continued site observation, monitoring and, where necessary, maintenance). Such funds do not however, include monies held as surety where no default has occurred and the reclamation or other bonded activity has been performed.

(b) If an Agreement State requires such payments for reclamation or long term surveillance (i.e., continued site observation, monitoring and, where necessary, maintenance), the payments must, after November 8, 1981, be sufficient to ensure compliance with those standards established by the Commission pertaining to bonds, sureties, and financial arrangements to ensure adequate reclamation and long term management of such byproduct material and its disposal site.

# UNITED STATES NUCLEAR REGULATORY COMMISSION

## RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

### PART 150

#### EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY IN AGREEMENT STATES UNDER SECTION 274

#### PROPOSED RULE MAKING

39 FR 32922  
Published 9/12/74  
Comment Period 11/11/74

##### TRANSURANIC WASTE DISPOSAL Exemptions and Continued Regulatory Authority

Section 150.15 of 10 CFR Part 150 states that persons in Agreement States are not exempt from the Commission's licensing and regulatory requirements with respect to, *inter alia*, the disposal of such byproduct, source, or special nuclear material as the Commission determines by regulation or order should, because of the hazards or potential hazards thereof, not be disposed of without a license from the Commission.

The Commission is publishing proposed amendments of 10 CFR Part 20 that would provide that disposal of transuranium elements (atomic number greater than 92) by burial in soil by licensees will not be authorized. This waste would be solidified (if liquid), packaged and transferred to the AEC as soon as practicable but within five years after its generation. The AEC would be responsible for subsequent storage, treatment and disposal of such waste. The AEC would take title to the waste upon delivery and would levy a fee on the generator of the waste to cover all costs for subsequent management.

Consistent with the policy expressed in the proposed amendments, the Commission is considering a determination that waste containing or contaminated with transuranium elements should not, because of the potential hazards thereof, be disposed of by persons in an Agreement State. The effect of this determination would be to reassert the Commission's authority in Agreement States over the disposal of transuranium elements by burial in soil. The proposed amendment to § 150.15 of Part 150 which follows would reflect the proposed determination.

Transuranic wastes generally consist of, but are not restricted to, (a) expendable material such as absorbent tissues,

clothing, gloves, plastic bags, and equipment; (b) solids such as ion exchange resins or filters from effluent treatment systems; (c) solidified liquid wastes, such as condensate and waste streams from process operations; (d) fuel hulls which remain after fuel reprocessing operations; and (e) liquid or solid wastes which contain or are contaminated with transuranium elements, resulting from reprocessing operations, that are not classified as high level waste. For example, all wastes originating in restricted areas of plutonium processing and fuel fabrication facilities fuel reprocessing facilities (except high level wastes), and laboratories using transuranium elements not in sealed sources should be considered transuranic waste and handled as such.<sup>1</sup> Radwaste from nuclear reactors would not generally be considered transuranic waste under normal operating conditions.<sup>1</sup>

The quantities of transuranium elements (mostly plutonium) thus far buried in licensed commercial grounds are estimated to be about 80 kilograms dispersed through a large volume (about 7.5 million cubic feet) of material.

In the evaluation of proposed licensed burial sites for radioactive wastes, two primary aspects are considered: (a) The geological, hydrological, and climatological characteristics of a site must be such that waste, once placed in the ground, will not migrate so as to have a significant impact on man or the en-

<sup>1</sup>Measurements made to determine the presence or absence of transuranium elements should be sufficiently sensitive to detect contamination levels as low as 10 nanocuries of transuranic elements per gram of waste. Waste that is suspect, but which has been measured and is not contaminated with more than 10 nanocuries per gram should be consigned to a licensed burial ground. A sensitivity of 10 nanocuries per gram for measurement has been chosen as a guide since it represents the upper range of concentration of radium in the earth's crust. In terms of long half life and radiotoxicity, transuranium elements are comparable to radium. It appears reasonable, therefore, to permit the burial of waste which might contain transuranic elements in such concentrations, or below, in licensed burial sites.

vironment; and (b) the burial grounds must be on land owned by the Federal or a state government to assure long-term control. Chemical and physical characteristics of plutonium are such that migration in soil or groundwater is unlikely. Deep well water samples taken at the perimeter of the burial sites have not shown any detectable plutonium (the principal transuranium element), thus indicating that the buried plutonium has remained immobile. On the basis of the foregoing, the Commission has concluded that the plutonium already buried does not constitute a potential hazard to man or the biosphere and thus should not be required to be removed from burial. Continued surveillance of the burial sites will be maintained to assure that a potential hazard does not develop.

Because of an anticipated increase in the quantities of wastes containing or contaminated with transuranium elements, the long half-life of transuranium elements, and their high specific radiotoxicity, the Commission believes that in the future, storage and disposal of such waste at Government-owned facilities should replace disposal in licensed commercial burial grounds. Such storage and disposal would provide a greater assurance against escape of the material to the biosphere, than would near-surface burial in commercial burial grounds. The Commission is also considering whether radionuclides other than those covered by this proposed regulation, because of potential hazards, should also be earmarked for management by the AEC, and it may propose further rule making actions in this regard.

The Commission will accept AEC and Agreement State licensee generated transuranic waste at designated Commission sites. Waste form specifications, packaging requirements, and charges will be published as a Miscellaneous Notice Concerning Commission Prices, Services, and Agreements. The Commission will continue to require, through the safety and safeguards reviews of licensed operations, that actions must be taken by its licensees to minimize to the extent possible the generation of transuranic wastes and would expect Agreement States to adopt similar requirements.



## PART 150 • PROPOSED RULE MAKING

Accordingly, concurrent with adoption in final form of the proposed amendments of 10 CFR Part 20, the following amendment to 10 CFR Part 150 would be made.

Pursuant to the Atomic Energy Act of 1954, as amended, and section 553 of Title 5 of the United States Code, notice is hereby given that adoption of the following amendment of 10 CFR Part 150 is contemplated. All interested persons who desire to submit written comments or suggestions for consideration in connection with the proposed amendment should send them to the Secretary of the Commission, U.S. Atomic Energy Commission, Washington, D.C. 20545, Attention: Dockets and Service Section, by November 11, 1974. Copies of comments on the proposed amendments may be examined at the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C.

Paragraph 150.15 (a) is amended to add a new subparagraph (7) to read as follows:

### § 150.15 Persons not exempt.

(a) . . .

(7) The disposal of transuranium elements (atomic number greater than 92) by burial.

42 FR 13837

Published 3/14/77

Comment Period expires 5/13/77

### [ 10 CFR Part 150 ]

#### PLUTONIUM-238 POWERED CARDIAC PACEMAKERS

##### Exemptions and Continued Regulatory Authority in Agreement States

The U.S. Nuclear Regulatory Commission is considering an amendment to its regulations in 10 CFR Part 150, "Exemptions and Continued Regulatory Authority in Agreement States Under section 274" (of the Atomic Energy Act of 1954, as amended), which would make the Commission the sole agency regulating the routine use under general license of plutonium-238 powered cardiac pacemakers and the distribution under specific license of pacemakers used under such general license.

Section 274 of the Atomic Energy Act of 1954, as amended, and § 150.15 of 10 CFR Part 150 state that persons in Agreement States are not exempt from the Commission's licensing and regulatory requirements with respect to the disposal of such byproduct, source, or special nuclear material as the Commission determines by regulation or order should, because of the hazards or potential hazards thereof, not be disposed of without a license from the Commission. Section 274 and § 150.15 further provide that within Agreement States the Commission may by rule, regulation, or order require that the manufacturer, processor or producer of any product containing byproduct, source, or special nuclear material shall not transfer pos-

session or control of such product except pursuant to a license issued by the Commission.

The Commission is publishing concurrently with this notice proposed amendments of 10 CFR Part 70 that would establish (a) a general license for hospitals for implantation of plutonium-238 powered cardiac pacemakers approved by the Commission for routine use, (b) a general license to patients to use such pacemakers, (c) a general license to persons possessing such pacemakers incidental to recovery and disposal, and (d) requirements for issuance of specific licenses authorizing distribution of pacemakers for possession and use under the general licenses. The pacemakers would be manufactured to rigid safety specifications which make it highly unlikely that the plutonium contained in the pacemakers would be released to the environment. However, in order to further assure that there would be little or no potential hazard to the public health and safety or to the environment resulting from the wide-scale distribution of pacemakers, the patient (a general licensee of the Commission) would be required to register with the Commission and to return the pacemaker to the distributor or manufacturer (a specific licensee of the Commission) for controlled storage and disposal or reuse when it is no longer of use to the patient.

An alternative to regulation of the routine distribution and use of the pacemakers exclusively by the Commission would be regulation of distributors and users by each of the Agreement States and the Commission. This alternative would provide less assurance of recovery since the users could be expected to move from State to State; further, the problems of accounting for the pacemakers could be compounded if many agencies were involved.

The Commission is considering a determination that, because of the potential hazards associated with disposal of large numbers of plutonium-238 powered cardiac pacemakers under routine use, they should not be disposed of without a license from the Commission. In implementing this determination the Commission would assert its authority in Agreement States over routine implantation, use and recovery of such pacemakers under general license and over the specifically licensed distribution of pacemakers used under the general license. The Commission's exercise of authority in the Agreement States together with its exercise of authority in non-Agreement States would result in only the Commission regulating the distribution, implantation, and recovery of pacemakers used under the general license. The proposed amendment to § 150.15 of Part 150 which follows would reflect the proposed determination. The proposed amendment would not affect an Agreement State's authority to license the use of nuclear powered cardiac pacemakers in investigational programs or to regulate radiation safety at installations at which such pacemakers are manufactured or distributed.

Accordingly, concurrent with adoption in final form of the proposed amendments of 10 CFR Part 70, the amend-

ment of 10 CFR Part 150 which follows would be promulgated.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of Title 5 of the United States Code, notice is hereby given that adoption of the following amendment to 10 CFR Part 150 is contemplated. All interested persons who desire to submit written comments or suggestions for consideration in connection with the proposed amendment should send them by May 13, 1977, to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Attention: Docketing and Service Branch. Copies of comments on the proposed amendment may be examined at the Commission's Public Document Room at 1717 H Street NW., Washington, D.C.

New paragraphs (a)(8) and (a)(9) are added to § 150.15 to read as follows:

### § 150.15 Persons not exempt.

(a) Persons in Agreement States are not exempt from the Commission's licensing and regulatory requirements with respect to the following activities:

(8) The transfer of possession or control by the manufacturer or distributor of cardiac pacemakers containing plutonium-238 and intended for routine use under the general license in § 70.19 of this chapter.

(9) The possession, use and disposal of plutonium-238 powered cardiac pacemakers under the general licenses in §§ 70.18, 70.19 and 70.20 of this chapter.

43 FR 22216

Published 5/24/78

Comment period expires 6/23/78

Special Nuclear Material of Moderate and Low Strategic Significance

See Part 73 Proposed Rule Making.

43 FR 22365

Published 5/25/78

Comment period expires 7/24/78

(extended to 12/21/78)

Safeguards on Nuclear Material—Implementation of US/IAEA Agreement

See Part 75 Proposed Rule Making.

43 FR 25433

Published 6/13/78

Comment period expires 6/23/78

Special Nuclear Material of Moderate and Low Strategic Significance; Safeguard Requirements; Correction

See Part 73 Proposed Rule Making.

## PART 150 • PROPOSED RULE MAKING

43 FR 54255

Published 11/21/78

Comment period extended to 12/21/78

*Safeguards on Nuclear Material—Implementation  
of US/IAEA Agreement*

See Part 75 Proposed Rule Making.

45FR15184

Published 3/10/80

Comment period expires 5/9/80

*Protection of Employees  
Who Provide Information*

See Part 19

Proposed Rule Making

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improvements.

On May 15, 1980, after review of the last version of the Action Plan, the Commission approved the staff's recommendations on those items in the Action Plan that should be implemented or considered over the long term to further enhance safety and also approved a list of requirements for new operating licenses which the staff recommended for imposition in current operating license reviews. On June 5, 1980, the Commission provided further guidance to the NRC staff on implementing the new operating license requirements of the NRC Action Plan. The Office of Nuclear Reactor Regulation was directed to proceed with safety evaluations using the list of new requirements and, in cases where Atomic Safety and Licensing Boards (ASLBs) have been awaiting NRC staff actions, preparation and presentation of testimony before Boards in individual operating license cases.

On June 16, 1980, the Commission issued a Statement of Policy (45 FR 41738) as further Commission guidance on operating licenses for the Boards and the NRC staff. Accompanying this policy was a report, "TMI-Related Requirements for New Operating Licenses (NUREG-0694)." The Commission decided that current operating license applications should be measured against the regulations, as augmented by the list of new requirements in NUREG-0694, and that the remaining items of the Action Plan should be addressed through the normal process for development and adoption of new requirements rather than through immediate imposition on pending applications.

The staff has been directed to seek public comment on the TMI-2 Action Plan for the purpose of developing further refinements, particularly with respect to the establishment of priorities for addressing those remaining items in the Action Plan not included in the list of new requirements for operating licenses. In the event that public comments lead the staff to conclude that substantive changes to the list of requirements for new operating licenses are necessary, the Commission will be promptly notified.

➤ 45 FR 65726

Published 10/3/80

Comment period expires 11/7/80

### Evaluation of Agreement State Radiation Control Programs: Proposed General Statement of Policy

AGENCY: U.S. Nuclear Regulatory Commission.

**ACTION:** Proposed general statement of policy.

**SUMMARY:** The Nuclear Regulatory Commission proposes to adopt as a general statement of policy the recently revised "Guide for Evaluation of State Radiation Control Programs Under Agreement With the U.S. Nuclear Regulatory Commission Pursuant to Section 274 of the Atomic Energy Act of 1954, As Amended", February 1, 1980. The revised Guide which was prepared by the NRC staff incorporates new criteria and guidelines for acceptable practice by Agreement States. This proposed statement of policy is being issued to inform the public of the criteria and guidelines which the Commission intends to use in evaluating Agreement State radiation control programs. The Commission expects that further revisions may be needed and is, accordingly, requesting comments on the proposed statement of policy including the criteria and guidelines for acceptable practice by Agreement States.

**DATES:** Comments are due on or before November 17, 1980.

**ADDRESSES:** All interested persons who desire to submit written comments or suggestions for consideration in connection with this proposed statement of policy should send them to Director, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Copies of public comments on this proposed policy statement may be examined at the Commission's Public Document Room at 1717 H Street, N.W., Washington, D.C.

**FOR FURTHER INFORMATION CONTACT:** John R. McGrath, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555—Telephone: 301-492-7767.

**SUPPLEMENTARY INFORMATION:** Section 274 of the Atomic Energy Act of 1954, as amended, was enacted in 1959 to provide a statutory means by which the NRC (then the AEC) could relinquish to the States part of its regulatory authority. The mechanism for the transfer of the Commission's regulatory authority is by an agreement between the Governor of a State and the Commission. Thus far, 25 States have entered into such agreements.<sup>1</sup>

Before entering into an agreement, the NRC is required to make a finding that the State's radiation control program is compatible with the Commission's and

that the State program is adequate to protect the public health and safety. Section 274j of the Atomic Energy Act provides that the NRC may terminate its agreement with a State if the Commission finds that such termination is necessary to protect the public health and safety or the State has not complied with one or more of the requirements of Section 274. In May 1965, the Commission adopted a policy of making an annual redetermination of the Agreement States' adequacy and continued compatibility with the NRC program. These determinations are primarily based on review meetings during which the individual State regulatory programs are evaluated on the basis of the "Guide for Evaluation of Agreement State Radiation Control Programs." Other factors such as information obtained through the NRC-State exchange-of-information program are also considered. Under the exchange-of-information program States provide to the NRC copies of all licensing actions taken by the State. In addition, the program involves exchanging information between the NRC and the States on the development of new regulations, and revisions to licensing and compliance policy, practices, and procedures. The States also provide information on incidents and other abnormal occurrences. As a result of the review of a State program, the NRC determines that the Agreement State's program is either:

(1) Adequate to protect the public health and safety; or

(2) Inadequate to protect the public health and safety.

A program may be adequate to protect the public health and safety although in need of improvement in specified areas or NRC may be unable to make a finding at the time of the review because of unresolved items or inadequate information necessitating a follow-up review. In such cases NRC follows up on these matters by correspondence, follow-up reviews or at the time of the next review.

A determination is also made that the program is either:

(1) Compatible with the NRC Regulatory program in areas related to the public health and safety; or

(2) Incompatible with the NRC Regulatory program;

or NRC is unable to make a finding at the time of the review because of unresolved items or inadequate information. A dispositive finding is made at the time the staff submits a consolidated assessment to the Commission in an annual report on all Agreement States.

In making a finding of adequacy, the NRC considers areas of the State

<sup>1</sup> Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Kansas, Kentucky, Louisiana, Maryland, Mississippi, Nebraska, Nevada, New Hampshire, New Mexico, New York, North Carolina, North Dakota, Oregon, Rhode Island, South Carolina, Tennessee, Texas and Washington.

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program which are critical to its primary function, i.e., protection of the public health and safety. For example, a State that does not have qualified personnel, fails to take adequate licensing actions or has no inspection program, would not be considered to have a program adequate to protect the public health and safety. Basic radiation protection standards, such as exposure limits, directly affect the States' ability to protect public health and safety. The NRC feels that it is important to strive for a high degree of uniformity in technical definitions and terminology, particularly as related to units of measurement and radiation dose. Maximum permissible doses and levels of radiation and concentrations of radioactivity in unrestricted areas as specified in 10 CFR Part 20 are considered to be important enough to require States to be essentially equivalent in this area in order to protect public health and safety. Basic radiation standards are also considered to be matters of compatibility. Certain administrative procedures, such as those involving the licensing of products containing radioactive material intended

for interstate commerce, are considered to be matters of compatibility.

If an Agreement State has adequate standards, compatible program procedures, and has acceptable performance NRC makes a finding of adequacy and compatibility. It is possible that a State program could have up-to-date regulations, all proper procedures, and adequate staff, but still fail to perform the necessary work. In this case a program could be found to be inadequate to protect the public health and safety, yet compatible with the Commission's program. In the worst case, a program can be found to be both inadequate and incompatible with the NRC program.

Section 274g of the Act directs the Commission "... to cooperate with the States in the formulation of standards for protection against hazards of radiation to assure that State and Commission programs for protection against hazards of radiation will be coordinated and compatible." Section 274j gives the Commission the authority to terminate or suspend an agreement with a State. Before the Commission can take such action, it must find that "(1) such termination or suspension is required to protect the public health and safety or (2) the State has not complied with one or more of the requirements of this section." The formal agreement, which the Governor signs, pledges the State to "use its best efforts ... to assure that the State's program will continue to be compatible."

The results of Agreement State program reviews are reported to the radiation control program director and upper level State management. In addition to the findings on adequacy and compatibility, comments and recommendations for improvement of the program may also be provided.

The Commission proposes to adopt as its general statement of policy a revised "Guide for Evaluation of Agreement State Radiation Control Programs Under Agreement With The U.S. Nuclear Regulatory Commission Pursuant to Section 274 of the Atomic Energy Act of 1954, As Amended", February 1, 1980, which identifies six essential elements of a radiation control program. These elements are: Organization, Administration, Personnel, Regulations, Licensing, and Compliance. The Guide divides each element into component parts or indicators, and establishes guidelines for acceptable practice under each indicator. The Guide includes 35 indicators and 102 guidelines for acceptable practice. Obviously, the indicators and guidelines in the Guide are not all of equal importance.

indicators reflect the *potential* seriousness of deficiencies in various program areas. NRC obviously uses discretion in reviewing deficiencies within the various categories.

It is the NRC's intention to use these categories in the following manner. In reporting findings to State management, the NRC will indicate the category of each comment made. If no significant Category I comments are provided, this will indicate that the program is adequate to protect the public health and safety. If at least one significant Category I comment is provided, the State will be notified that the program deficiency may seriously affect the State's ability to protect the public health and safety and should be addressed on a priority basis. When more than one significant Category I comment is provided, the State will be notified that the need of improvement in the particular program areas is critical. The NRC would request an immediate response, and perform a follow-up review of the program within six months. If the State program has not improved or if additional deficiencies have developed, the NRC may institute proceedings to suspend or revoke all or part of the Agreement. Category II comments would concern functions and activities which support the State program and therefore would not be critical to the State's ability to protect the public. The State will be asked to respond to these comments and the State's actions will be evaluated during the next regular program review. Category III deficiencies likewise will be brought to the State's attention and the State's actions evaluated during the next regular review.

On November 13, 1979, a draft of the revised Guide was sent to the Agreement States for comment. The draft revised Guide was also reviewed by NRC staff offices. Comments were received from fifteen Agreement States. The States were generally supportive of the current NRC review program but were opposed to codification of the criteria. One State commented that the primary indicators of a State's ability to protect the public health and safety are the exposure experience of radiation workers, patients in nuclear medicine and the public in the vicinity of licensed facilities and suggested that the Commission develop standard methods for the assessment of such exposures.

On November 13, 1979, a draft of the revised Guide was sent to the Agreement States for comment. The draft revised Guide was also reviewed by NRC staff offices. Comments were received from fifteen Agreement States. The States were generally supportive of the current NRC review program but were opposed to codification of the criteria. One State commented that the primary indicators of a State's ability to protect the public health and safety are the exposure experience of radiation workers, patients in nuclear medicine and the public in the vicinity of licensed facilities and suggested that the Commission develop standard methods for the assessment of such exposures.

Other State comments and concerns were as follows:

1. What constitutes compatibility?
2. The criteria for the administrative aspects of the Agreement State program are too detailed.
3. The criteria should also address the political environment of the program such as the effect of public opinion on the operation of the program.
4. During the review process contact with the Governor and/or the State Legislature should normally be made.
5. Much of the periodic review is repetitive and could be streamlined.
6. One State questioned the NRC's ability to meet the criteria it uses to evaluate the States.

Some general comments generated by the Commission staff were as follows:

1. The technical qualifications of the Agreement State staff to handle a broad range of safety matters which could arise in Agreement State programs should be improved.
2. The NRC should use performance data, such as incident reports, to assess the effectiveness of State programs.

With regard to the development of specific indicators related to exposure experience of radiation workers, patients in nuclear medicine and the public in the vicinity of licensed facilities and use of performance data such as incident reports the Commission is seeking comments on the following:

1. What should be the proper reference indicator(s)—average dose, total person-rem, number of overexposures? Should the indicator(s) be related to numbers of licensees, number of licensee employees, number



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of radioactive material manipulations, size (curie quantity) of material manipulations, etc.

2. Are data currently available to regulatory officials upon which such indicators could be fairly based?

3. If such data are not available, what legal and regulatory constraints, if any, exist in collecting the necessary information?

4. What are the estimated levels of effort necessary by each State to collect the necessary reference data assuming there are no legal or regulatory constraints?

5. What other factors might affect the development of such indicators?

The Commission considered an NRC staff recommendation to conduct a public hearing on the promulgation of the Policy Statement. The Commission noted the potential advantages of such a hearing but decided to defer a decision on the matter pending receipt of public comments.

Although the Commission proposes to adopt the revised "Guide for Evaluation of Agreement State Radiation Control Programs" as a general statement of policy, it recognizes that there may be aspects of the policy statement which are susceptible of further improvement and that new elements may need to be added to the review process as times and situations change. Accordingly, the Commission is inviting comments from the general public on the following issues:

1. What additional criteria, if any, should be considered in the evaluation of Agreement State programs? Some States have suggested, for example, that NRC should use population and occupational exposure data to evaluate the effectiveness of State regulatory programs.

2. What, if any, of the existing guidelines are not appropriate criteria by which to evaluate the Agreement States? How should they be modified? The guidelines for acceptable practice cover a wide range of topics. Some guidelines are of an administrative nature and it has been suggested that these guidelines may not have a bearing on the effectiveness of a State program.

3. In what additional ways can the NRC oversight of Agreement States be strengthened? The Uranium Mill Tailings Act of 1978 requires States to follow specific procedures in the licensing of mill tailings. This was a significant extension of requirements on Agreement States and it has been suggested that other Agreement State program areas should be under closer scrutiny by NRC.

4. Should Agreement State reviews be conducted by a third party (another Federal agency, consultant, or other organization) and would such a review result in improved State regulatory programs?

5. How should the results of the reviews be reported? At present, results of review meetings are reported to State

health officers or an equivalent official in State government. After reviewing the NRC Agreement State program, the General Accounting Office suggested that meeting results be routinely reported to State governors. Individual States have also suggested such contacts as well as contacts with State legislatures. To date NRC has involved the office of the Governor in selected cases and does not hesitate to do so when deemed necessary.

6. Are there other comments and concerns relating to Agreement State-NRC relations which should be considered?

Dated at Washington, D.C., this 29th day of September 1980.

For the U.S. Nuclear Regulatory Commission.

Samuel J. Chilk,

Secretary of the Commission.

### Proposed General Statement of Policy

Guide for Evaluation of State Radiation Control Programs Under Agreement With the U.S. Nuclear Regulatory Commission Pursuant to Section 274 of the Atomic Energy Act of 1954, as Amended

February 1, 1980.

### Introduction

Section 274 of the Atomic Energy Act of 1954, as amended, requires that

Agreement States' radiation control programs must remain adequate to protect the public from radiation hazards. In addition, the U.S. Nuclear Regulatory Commission (NRC) and the States pledge to use their best efforts to maintain compatible programs under the terms of each Agreement. The NRC has for many years periodically reviewed Agreement State programs to determine their adequacy to protect the public health and safety and compatibility with the NRC Program. Section 274j of the Atomic Energy Act of 1954, as amended, was amended on November 8, 1978 to require the periodic review of Agreement State programs by NRC. Although the Act specified no frequency for such reviews the NRC believes the interval between reviews should not exceed 18 months.

Information on the performance of Agreement State programs is obtained in several ways, the principal method being periodic review meetings with the States during which the essential elements of an RCP are reviewed and discussed with various levels of State RCP personnel. During the review process, each State program is evaluated on an individual basis against the criteria and guidance provided, taking into consideration individual State program differences such as size, scope, complexity of licensed activities, needs, and requirements of the program.

The Guide for Evaluation of State Radiation Control Programs has been

prepared to assist the NRC in determining the adequacy and compatibility of State Radiation Control Programs (RCP) and to provide basic guidance to the States as to what is considered acceptable practice in connection with the administration of an RCP. The Guide contains six Sections, each dealing with one of the essential elements of an RCP which are: Organization, Management and Administration, Personnel, Regulations, Licensing, and Compliance. Each Section contains (a) a summary of the general significance of the program element, (b) indicators which must be considered to determine adequacy, and (c) guidance for acceptable practice. This Guide provides for a categorization of the relative importance of each indicator and is further discussed below.

Upon determining the status of the indicators, the reviewer must make a judgment as to the adequacy of the State's practice by comparison with the guidance provided. The relative importance of each indicator must be judged in arriving at a final determination of the overall adequacy of a State's program to protect the public health and safety and its compatibility with the Commission's program for the regulation of similar materials and using the guidance discussed below.

As a result of the review of a State program, the NRC determines that the Agreement State's program is either:

(1) Adequate to protect the public health and safety;

or

(2) Inadequate to protect the public health and safety; or NRC may be unable to make a finding at the time of the review because of unresolved items or inadequate information necessitating a follow-up review. A program may be adequate to protect the public health and safety although in need of improvement in specified areas. In such cases NRC follows-up on these matters by correspondence, follow-up reviews or at the time of the next review.

A determination is also made that the program is either:

(1) Compatible with the NRC Regulatory program in areas related to the public health and safety; or

(2) Incompatible with the NRC Regulatory program; or NRC is unable to make a finding at the time of the review because of unresolved items or inadequate information.

The Guide is not intended to be a standard and its use will be limited to that intended in the use of the term "Guide." As times and situations change and as new elements are added to the review process as a result of the continuing review of State programs,

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changes will be made in the Guide. Some new indicators and guides are included in this revision as relates to uranium mill States. However, additional post agreement review guidance will be developed for these States prior to November 8, 1981, the date when Agreement State programs for regulating uranium mills must conform to the requirements set forth in the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA).

### *Categories of Indicators Used To Determine Adequacy of Agreement State Programs*

During the review process, each State program is evaluated on an individual basis against the indicators and guidance, taking into consideration individual State program differences such as size, scope, complexity of licensed activities, needs, and requirements of the program. The indicators are recognized as not having equal importance when making a judgment as to adequacy of the State's program, but formal guidance has not previously been provided on the relative importance of each indicator. Formal guidance would be desirable from the points of view of (1) the Agreement States, (2) NRC staff involved in evaluations, (3) the Commission which, as an agency, makes formal determinations of adequacy and compatibility, and (4) the public. Three categories of indicators have been established.

#### *Category I*

Category I indicators reflect a State program's ability to adequately protect the public health and safety. Significant problems in meeting the guides for acceptable practice for these indicators probably mean the State program has a serious need for improvement. If significant problems exist in more than one of these areas, then the need for improvements may be critical.

Category I Indicators are:

- Legal Authority
- Emergency Plans
- Compatibility of Regulations (Basic Radiation Protection Standards-dose standards and effluent limits, Part 19, and UMTRCA Only)
- Personnel Qualifications
- Technical Quality of Licensing Actions
- Adequacy of Product Evaluations
- Status of Inspection Program
- Inspectors' Performance and Capability
- Response to Incidents and Alleged Incidents
- Enforcement Procedures
- Equipment Failure

#### *Category II*

Category II Indicators address functions and activities which support the program. Good performance in meeting the guidelines for these indicators is considered essential if the State is to avoid significant problems in implementing an effective program to protect the public health and safety.

Category II Indicators are:

- Location of RCP Within State Organization
- Internal Organization of RCP
- Legal Assistance
- Budget
- Administrative Procedures
- Planning
- Laboratory Support
- Number of Personnel
- Personnel Duties
- Training
- Salaries
- Staff Turnover
- Compatibility of Regulations (Other Than Basic Radiation Protection Standards, Part 19 and UMTRCA)
- Updating Regulations
- Licensing Procedures
- Quality Assurance (Licensing)
- Inspection Procedures
- Inspection Frequency
- Inspection Reports
- Independent Measurements

#### *Category III*

Category III Indicators address those areas of a State program which are considered highly desirable features of a soundly based, comprehensive program for controlling agreement materials.

Category III Indicators are:

- Technical Advisory Committees and Consultants
- Office Facilities, Equipment and Support Services
- Public Information
- Recruiting
- Medical Advisory Committee

### *Guidance for Using and Interpreting Categories of Indicators and Their Guides for Acceptable Practice*

Reviews of Agreement State programs usually result in comments and recommendations being made to the State which are always intended to improve the State's program. Most comments are developed using the Guides for Acceptable Practice as criteria.\* Many Indicators have multiple

guides. Comments on the need for improvements with reference to a specific guide will not necessarily mean a major problem exists within the Indicator area.

As an example, a Category I Indicator is Status of Inspection Program: A State having a large backlog of overdue inspections may have a serious problem.\*\* In a State having no backlog, however, a reviewer may nonetheless comment on the need for improving the statistical information to permit better assessment of the status of the inspection program (a Guide for Acceptable Practice). As another example, minor comments may be made by a reviewer on technical aspects of State licensing actions without having to conclude that a serious problem exists in this Indicator area.

The purpose of categorizing the Indicators is to make the reviewer and the State, both aware of the *potential significance* of comments in specific Indicator areas. The reviewer must exercise judgment in concluding whether or not serious problems exist, taking into consideration the nature of the comments, past history, size of the problem, needs and requirements of the State's programs, and the response of the State to the specific comments and recommendations offered by the reviewer.

A large number of comments in a specific Indicator area should alert the reviewer and the State that potentially serious problems exist in that Indicator area. Comments directed at significant problems identified in several Category I Indicator areas would strongly suggest the State program may be in critical need of improvement. Category II Indicators frequently can be used to identify underlying problems that are causing, or contributing to, difficulties in Category I Indicators.

In cases where a review results in comments and recommendations for improvements in more than one Category I Indicator area, the reviewer should state whether the comments are major or minor and whether or not the comments as a whole indicate the program is in need of critical improvements. This should be conveyed to the State at the review meeting and in the subsequent letters to the State.

\*Examples of other criteria that may be used are: NRC Branch Positions; Inspection and Licensing Guides; Regulatory Guides; NCRP Reports; etc.

\*\*If the State's inspection priorities call for inspections more frequently than NRC's, a backlog is indicative of a serious problem only if the overdue inspections exceed those required by NRC's priorities.

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### Organization

The effectiveness of any State RCP may be dependent upon the underlying legal authority, assignment of responsibilities and its location within the overall State organization structure. The RCP should be in a position to compete effectively with other health and safety programs for budget and staff. Program management must have access to individuals or groups which establish health and safety program priorities. The RCP should be organized to achieve a high degree of efficiency in supervision, work functions, and communications.

| Indicators                                                       | Category | Guide for acceptable practice                                                                                                                                                                                                                        |                                                 |                                                                                                                                                                                                                               |
|------------------------------------------------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Legal Authority.....                                             | I        | Clear statutory authority designating State radiation control agency and providing for promulgation of regulations, licensing, inspection and enforcement.                                                                                           | Legal Assistance.....                           | II                                                                                                                                                                                                                            |
|                                                                  |          | Where regulatory responsibilities are divided between State agencies, clear understandings should exist as to division of responsibilities and requirements for coordination.                                                                        |                                                 |                                                                                                                                                                                                                               |
| Location of Radiation Control Program Within State Organization. | II       | RCP—located in a State organization parallel with comparable health and safety programs. Program Director has access to appropriate levels of State management.                                                                                      | Technical Advisory Committees, and Consultants. | III                                                                                                                                                                                                                           |
| Internal Organization of Radiation Control Program.              | II       | RCP—organized with the view toward achieving an acceptable degree of staff efficiency, place appropriate emphasis on major program functions, and provide specific lines of supervision from program management for the execution of program policy. |                                                 |                                                                                                                                                                                                                               |
|                                                                  |          | Where regional offices are utilized, the lines of communication and administrative control between the regions and the central                                                                                                                       |                                                 |                                                                                                                                                                                                                               |
|                                                                  |          |                                                                                                                                                                                                                                                      |                                                 | office (Program Director) are clearly drawn to provide uniformity in inspection policy, procedures, and supervision.                                                                                                          |
|                                                                  |          |                                                                                                                                                                                                                                                      |                                                 | Legal staff assigned to assist the RCP or procedures exist to obtain legal assistance expeditiously. Legal staff should be knowledgeable regarding RCP program, statutes, regulations and possible needs.                     |
|                                                                  |          |                                                                                                                                                                                                                                                      |                                                 | Medical—to provide broad guidance and policy on the use of radioactive drugs in or on humans. Committee normally represents a wide spectrum of medical disciplines.                                                           |
|                                                                  |          |                                                                                                                                                                                                                                                      |                                                 | Consultants, Technical Committees, Federal Agencies used to extend staff capabilities for unique and technically complex problems.                                                                                            |
|                                                                  |          |                                                                                                                                                                                                                                                      |                                                 | Procedures exist to avoid conflict of interest even though Committees are advisory. This does not mean that representatives of the regulated community should not serve on advisory committees or not be used as consultants. |

### Management and Administration

State RCP management must be able to meet program goals through strong, direct leadership at all levels of supervision. To meet program goals, it may be necessary to successfully compete against other State health programs for budget and manpower. The program budget must reflect annual changes in the number and complexity of applications and licenses, and the increase in costs due to normal inflation. Administrative procedures are necessary to assure uniform and appropriate treatment of all regulated parties. Procedures for receiving information on radiological incidents, emergency response, and providing information to the public are necessary. Procedures to provide feedback to supervision on status and activities of the RCP are necessary. Adequate facilities, equipment and support services are needed for optimum utilization of personnel resources. Laboratory support services should be administered by the RCP or be readily available through established administrative procedures. The cost of expensive portable and laboratory equipment, printing services, travel funds, etc., must be included in the consideration of RCP budgets.

| Indicators                                                                                                                                  | Category | Guide for acceptable practice                                                                                                                                                                                                                                                                                                                                                                            | Indicators                                          | Category | Guide for acceptable practice                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Plans for Response to Local Emergencies Involving Agreement Materials, e.g., Spills, Transportation Accidents, Thefts, Overexposures, etc.. | I        | Emergency communication procedures are adequately established with appropriate local, county and state agencies.                                                                                                                                                                                                                                                                                         |                                                     |          |                                                                                                                                                                                                                                                                     |
|                                                                                                                                             |          | Responsibilities and actions to be taken by State Agencies are well defined. The Plan should be specific as to persons responsible for initiating response actions, conducting operations, and cleanup. Plan is dated and revisions shown.                                                                                                                                                               |                                                     |          |                                                                                                                                                                                                                                                                     |
|                                                                                                                                             |          | Plans distributed to appropriate persons and agencies. NRC should be provided the opportunity to comment on the Plan while in draft form.                                                                                                                                                                                                                                                                | For States collecting fees, procedures exist        |          | duties as required and to provide a high degree of uniformity and continuity in regulatory practices.                                                                                                                                                               |
|                                                                                                                                             |          | Plan annually reviewed by Program staff for adequacy and that content is current.                                                                                                                                                                                                                                                                                                                        |                                                     |          | Adequate to assure RCP manager receives periodic reports on status of regulatory actions (backlogs, problem cases, inquiries, regulations revisions). Statistical data provided on timely basis to NRC.                                                             |
| Budget.....                                                                                                                                 | II       | Source of funds—principal operating funds are from sources which provide continuity and reliability, i.e., general tax, license fees, etc. Supplemental funds may be obtained through contracts, cash grants, etc.                                                                                                                                                                                       | Planning.....                                       | II       | Adequate to assure communication and liaison between licensing and compliance staffs.                                                                                                                                                                               |
|                                                                                                                                             |          | Level of funding—approximately \$200-\$350 per license, excluding uranium mill and low level waste burial licenses. These values are subject to variation based on the complexity of programs, geographical area, regionalization, and may need to be higher for specialized regulatory programs. (No level of funding is given here for uranium mill States but is addressed in the Personnel section.) | Laboratory Support.....                             | II       | Policies established for handling public relations and enforcement actions.                                                                                                                                                                                         |
|                                                                                                                                             |          | Changes in level of funding—normally, funding of RCP is increased from year to year because of increased number of licenses and inflationary pressures. A decrease in total program funds or \$ per license figure greater than 10% may be significant.                                                                                                                                                  |                                                     |          | for assignment of duties to non-technical staff.                                                                                                                                                                                                                    |
|                                                                                                                                             |          | Adequate funding is available to cover authorized positions, official travel, handling of emergencies and obtaining contract services.                                                                                                                                                                                                                                                                   | Office Facilities, Equipment, and Support Services. | III      | Policy on press releases—procedures are available to assure timely release of factual information by qualified persons, and timely notification to the NRC and other agreement states.                                                                              |
|                                                                                                                                             |          |                                                                                                                                                                                                                                                                                                                                                                                                          |                                                     |          | RCP management periodically assesses workload trends, resources and changes in legislative and regulatory responsibilities to forecast needs for increased staff, equipment, services and funding.                                                                  |
|                                                                                                                                             |          |                                                                                                                                                                                                                                                                                                                                                                                                          | Public Information.....                             | III      | Laboratory services—RCP has capability in-house or readily available through established procedures for laboratory support to conduct bioassays, analyze environmental samples, analyze samples collected by inspectors, etc. on a priority established by the RCP. |
|                                                                                                                                             |          |                                                                                                                                                                                                                                                                                                                                                                                                          |                                                     |          | Adequate secretarial and clerical support. Automatic typing and Automatic Data Processing and retrieval capability available to larger (>300-400 licenses) programs. Similar services available to regional offices if utilized.                                    |
|                                                                                                                                             |          |                                                                                                                                                                                                                                                                                                                                                                                                          |                                                     |          | Inspection and licensing files are available to the public consistent with State administrative procedures.                                                                                                                                                         |

## POLICY STATEMENTS

Administrative Procedures ..... II Availability of current internal guides, policy memoranda, and performance reviews—adequate to assure that staff performs its

Proprietary information—protected from public disclosure by agency procedures or by State laws.

### Personnel

RCP must be staffed with a sufficient number of trained personnel. The evaluation of license applications and the conduct of inspections require staff with in-depth training and experience in radiation protection and related subjects. The staff must be adequate in number to assure timely licensing, inspection, and enforcement actions of appropriate quality to assure protection of the public health and safety. Periodic training of existing staff is necessary to maintain capabilities in a rapidly changing technological environment. Program management personnel must be qualified to exercise adequate supervision in all aspects of a state radiation control program.

| Indicators                | Category | Guide for acceptable practice                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Indicators           | Category | Guide for acceptable practice                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Qualifications .....      | I        | Professional staff—bachelor's degree or equivalent training in the physical and/or life sciences. Additional training and experience in radiation protection for senior personnel is commensurate with the type of licenses issued and inspected by the State.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |          | On-the-job training—specific program established for on-the-job training of new employees by supervisory and senior personnel.                                                                                                                                                                                                                                                                                                                                                                                                              |
| Number of Personnel ..... | II       | Staffing level—approximately 1-1.5 person-year per 100 licenses in effect. Not less than two professionals available per program with training and experience to operate RCP in a way which provides continuous coverage and continuity.<br>This level needs to be higher for States administering major and/or complex licensed activities, i.e., low level commercial waste burial sites and uranium mills. Current indications are that 2-2.5 professional person years' effort and \$16,000 contract costs is needed to process a new mill license or major renewal to meet requirements of Uranium Mill Tailings Radiation Control Act of 1978 for a conventional mill.* This effort must include expertise in radiological matters, hydrology, geology, and structural aspects. |                      |          | Utilization of specified short courses and workshops—RCP has a program to utilize courses to maintain appropriate level of staff technical competence in areas of changing technology.<br>Level of training effort—normally 5-10% total RCP manpower effort is spent in training. Appropriate training courses taken when available.                                                                                                                                                                                                        |
| Duties .....              | II       | Supervisory personnel—to provide guidance and review the work of senior and junior personnel.<br>Senior personnel—review applications and inspect licenses independently. Also monitor work of junior personnel and participate in the establishment of policy.<br>Junior personnel—initially limited to reviewing license applications and inspecting small programs under close supervision.                                                                                                                                                                                                                                                                                                                                                                                        | Salaries .....       | II       | Salary levels—adequate to recruit and retain persons of appropriate professional qualifications. Salaries are comparable to similar employment in the geographical area.<br>Promotions—organization structure is such that staff turnover is minimized and program continuity maintained through opportunities for promotion. Promotion opportunities should exist from junior level to senior level or supervisory positions. There also should be opportunity for periodic salary increase compatible with experience and responsibility. |
| Training .....            | II       | Senior personnel should have received NRC core courses in licensing orientation, inspection procedures, medical practices and industrial radiography practices. (For mill States should also include mill training.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Staff Turnover ..... | II       | Staff turnover should be minimized by combinations of opportunities for training, promotions, and competitive salaries.                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                           |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Recruiting .....     | III      | Job descriptions—written job descriptions are prepared so that professional qualifications needed to fill vacancies can be readily identified.<br>Notification of vacancies—vacancies are published in state recruitment lists, professional society journals, and local newspapers.                                                                                                                                                                                                                                                        |

### Regulations

Regulations provide the foundation upon which licensing, inspection, and enforcement decisions are made. Regulations also provide the standards and rules within which the regulated must operate. Periodic revisions are necessary to reflect changing technology, improved knowledge, current recommendations by technical advisory groups, and consistency with NRC regulations. Procedures for providing input to the NRC on proposed changes to NRC regulations are necessary to protect the State's interests and requirements. The public and, in particular, affected classes of licensees should be granted the opportunity and time to comment on rule changes.

| Indicators          | Category        | Guide for acceptable practice                                                                                                                                                                                                                                                                                    | Indicators                    | Category | Guide for acceptable practice                                                                                                                                                                                                                                                                                              |
|---------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Compatibility ..... | I <sup>1</sup>  | The RCP has established procedures for effecting appropriate amendments to State regulations to maintain a high degree of uniformity with NRC regulations.                                                                                                                                                       |                               |          | compatible regulatory changes prior to formal adoption if consistent with State law. State licensees are notified of such changes as appropriate.                                                                                                                                                                          |
|                     | II <sup>2</sup> | NRC comment—opportunity is provided for the NRC to comment on draft changes in State regulations.<br>State responds appropriately to such comments prior to formal adoption (conforms regulations to maintain compatibility).<br>Administrative recognition of NRC regulations—State administratively recognizes | Updating of Regulations ..... | II       | Regulations—scheduled for revision at least every 2 years and those necessary to maintain compatibility made effective within 3 years of adoption by NRC.<br>Public participation—opportunity is provided for the public to comment on proposed regulation changes. (Required for uranium mill regulation after 11/8/81.). |

<sup>1</sup> Only Part 19, Radiation Standards (dose standards and effluent limits) and those required by UMTRCA.  
<sup>2</sup> Other regulations.



## POLICY STATEMENTS

### Licensing

It is necessary in licensing byproduct, source, and special nuclear materials that the State regulatory agency obtain information about the proposed use of nuclear materials, facilities and equipment, training and experience of personnel, and operating procedures appropriate for determining that the applicant can operate safely and in compliance with the regulations and license conditions. An acceptable licensing program includes: preparation and use of internal licensing guides and policy memoranda to assure technical quality in the licensing program (when appropriate, such as in small programs, NRC Guides may be used); supervisory review of complex license applications; a quality assurance program; use of advisory committee or consultant having special expertise; pre-licensing inspection of complex facilities; timely action on applications; and the implementation of administrative procedures to assure documentation and maintenance of adequate files and records.

| Indicators                              | Category | Guide for acceptable practice                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Indicators                 | Category | Guide for acceptable practice                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical Quality of Licensing Actions. | I        | Essential elements of applications—Information has been submitted to the agency, which meets current regulatory guidance for describing the isotopes and quantities to be used, qualifications of persons who will use material facilities and equipment, and operating and emergency procedures sufficient to establish the basis for licensing actions.<br>Prelicensing visits made for complex and major licensing actions.<br>Issuance of license—license is clear, complete, and accurate as to isotopes, forms, quantities, authorized uses, and permissive or restrictive conditions.<br>Procedures for reviewing licenses prior to renewal to assure that supporting information in the file reflects the current scope of the licensed program. |                            |          | Licensing actions are coordinated when appropriate with compliance staff.<br>Application review—preliminary review and screening is normally taken within 30 days of receipt of application.<br>License expiration notices—sent to licensees 30–60 days prior to expiration.<br>Notice of timely renewal procedures in use.<br>Files—maintained in an orderly fashion to allow fast, accurate retrieval of information and documentation of discussions and visits.                                                                                                         |
| Adequacy of Product Evaluations.        | I        | Staff evaluates manufacturer's or distributor's data on sealed sources and devices to assure integrity and safety for users—data submitted as outlined in NRC, State, or appropriate Organization Guides.<br>Manufacturer's information in labels and brochures relating to radiation health and safety, assay, and calibration procedures is adequate.                                                                                                                                                                                                                                                                                                                                                                                                  |                            | II       | Exchange of information—evaluation sheets, service licenses, and licenses authorizing distribution to general licensees and persons exempt from licensing are submitted to NRC on a timely basis.<br>Standard license conditions comparable with current NRC standard license conditions used to expedite and provide uniformity in the licensing process.<br>For States with separate licensing and inspection staffs, opportunities should be provided for license reviewers to accompany inspectors to observe application of regulatory and radiation safety practices. |
| Licensing Procedures                    | II       | Internal licensing guides, checklists, and policy memoranda consistent with current NRC practice are used in licensing actions.<br>License applicants (including renewals) furnished copies of applicable guides and regulatory positions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Quality Assurance          | II       | Periodic supervisory review of selected license cases handled by each reviewer and results documented. Complex licensees (major manufacturers, large scope—Type A Broad, potential for significant releases to environment) receive second party review (supervisory, committee, consultant).                                                                                                                                                                                                                                                                               |
|                                         |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Medical Advisory Committee | III      | Advises RCP on policy matters related to use of radioisotopes in or on humans.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### Compliance

Periodic inspections of licensed operations are essential to assure that activities are being conducted in compliance with regulatory requirements and consistent with good safety practices. The frequency of inspections depends on the amount and the kind of material, the type of operation licensed, and the result of previous inspections. The capability of maintaining and retrieving statistical data on the status of the compliance program is necessary. The regulatory agency must have the necessary legal authority for prompt enforcement of its regulations. This may include, as appropriate, administrative remedies, orders requiring corrective action, suspension or revocation of licenses, the impounding of materials, and the imposing of civil or criminal penalties.

| Indicators                   | Category | Guide for acceptable practice                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Indicators                                   | Category | Guide for acceptable practice                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Status of Inspection Program | I        | Statistics—Adequate to permit Program Management to assess the status of the inspection program on a periodic basis. Information showing the number of inspections conducted, the number overdue, the length of time overdue and the priority categories should be readily available.<br>At least semiannual inspection planning for number to be performed, assignments to Sr. vs. Jr. staff, assignments to regions, identification of special needs and periodic status reports. | Inspector's Performance and Capability.      | I        | Inspector capability—competent to evaluate health and safety problems and apply State regulations. Must demonstrate to supervisor and understanding of regulations, inspection guides, and policies prior to independently conducting inspections.<br>Compliance supervisor (may be RCP manager) conducts annual field evaluation of each inspector to assess performance and assure application of appropriate and consistent policies and guides. |
|                              |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Response to Incidents and Alleged Incidents. | I        | Inquiries promptly made to evaluate the need for onsite investigations.                                                                                                                                                                                                                                                                                                                                                                             |

## POLICY STATEMENTS

| Indicators                           | Category | Guide for acceptable practice                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Indicators                           | Category | Guide for acceptable practice                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                      |          | <p>Onsite investigations promptly made of incidents requiring reporting to Agency in less than 30 days. (10 CFR 20.403 types.)</p> <p>Investigations made of incidents not requiring reporting to the Agency in less than 30 days made during the next scheduled inspection.</p> <p>Onsite investigations promptly made of technically non-reportable incidents but which may be of significant public interest and concern, i.e., transportation accidents.</p> <p>Use of medical consultants when needed to diagnose or treat radiation injuries and use of other technical consultants for specialized problems.</p> <p>Conduct of investigations—indepth review of circumstances completed on a high priority basis. When appropriated, investigations include reenactments and time-study measurements (normally within a few days). Investigation (or inspection) results documented and enforcement action taken when appropriate.</p> <p>Notification—State licensees and the NRC are notified of pertinent information about an incident which could be relevant to other licensed operations (e.g., equipment failure, improper operating procedures).</p> <p>Enforcement Procedures..... I Enforcement letters—notice issued within 30 days following inspection.</p> <p>Employ appropriate regulatory language.</p> <p>Clearly specify all items of non-compliance and health and safety matters identified during the inspection and referencing the appropriate regulations or license condition being violated.</p> <p>Separation of enforcement actions subject to State Radiation Control Act and State OSHA regulations.</p> <p>Time period specified for licensee to respond as to corrective actions and actions taken to prevent recurrence (normally 20-30 days). Inspector and Supervisory review is made of licensee responses.</p> <p>Licensee responses to enforcement letters promptly acknowledged as to adequacy and resolution of unresolved items.</p> <p>Written procedures exist for handling escalated enforcement cases of varying degrees.</p> <p>Impounding of material—in accordance with State administrative procedures.</p> <p>Impartial administration—opportunity for hearings is provided.</p> |                                      |          | <p>out previous violations, assuring exit interviews with management and issuing appropriate notification of violations of health and safety problems.</p> <p>Procedures established for maintaining licensees' compliance histories.</p> <p>Oral briefing of supervisor or senior inspector upon return from non-routine inspections.</p> <p>For States with separate licensing and inspection staffs, procedures established for feedback of information to license reviews.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                      |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Inspection Frequency..... II         |          | <p>Inspection priority system—specific frequency of inspections is based upon the potential hazards of licensed operations, e.g., major processors, broad licensees, and industrial radiographers inspected approximately annually—smaller or less hazardous operations inspected less frequently. The minimum inspection frequency should be consistent with the NRC system.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                      |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Adequacy of Inspection Reports... II |          | <p>Findings of inspections—report describes scope of inspection, contains substantiation of all items of non-compliance and health and safety matter, describes scope of licensee's program, and substance of discussion with licensee management and licensee's response.</p> <p>Reports uniformly and adequately document the results of inspection and identifies areas of the licensee's program which should receive special attention at the next inspection. Reports should show the status of previous noncompliance and the independent physical measurements made by the inspector.</p> <p>Supervisory review of reports and enforcement actions.</p>                                                                                                                                                                                                                                                                                                                       |
|                                      |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Independent Measurements..... II     |          | <p>Number and type—sufficient to ensure licensee's control of materials and to validate licensee's measurements.</p> <p>Instrumentation—adequate for surveying licensed operations (e.g., survey meters, air samplers, lab counting equipment for smears, identification of isotopes, etc.).</p> <p>GM Survey Meter: 0-20 mR/hr. Ion Chamber Survey Meter: several r/hr. Neutron Survey Meter: Fast &amp; Thermal. Alpha Survey Meter: 0-100,000 c/m. Air Samplers: Hi and Lo Volume. Lab Counters: Detect 0.001 µCi/wipe. Velometers. Smoke tubes. Lapel air samplers.</p> <p>Instrument calibration services or facilities—readily available and appropriate for instrumentation used. Licensee equipment and facilities should not be used unless under a service contract. Exceptions for other State Agencies, e.g. a State University may be made.</p> <p>Agency instruments should be calibrated at intervals not greater than that required of licensees being inspected.</p> |
| Reporting of Equipment Failure.... I |          | <p>Information on incidents involving failure of equipment is provided to the Agency responsible for evaluation of the device for an assessment of possible generic design deficiency.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                      |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Inspection Procedures..... II        |          | <p>Inspection guides—Consistent with current NRC guidance are used by inspectors to assure uniform and complete inspection practices and provide technical guidance in the inspection of licensed programs. The NRC Agreement States Guides may be used if properly supplemented by policy memoranda, agency interpretations, etc.</p> <p>Written inspection policies—issued to establish system for conducting announced and unannounced inspections, obtaining corrective action, following up and closing</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                      |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## REGULATORY GUIDES

| Number | Title                                                                                                                                   | Date                | Revision |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------|
| 1.32   | Criteria for Safety-Related Electric Power Systems for Nuclear Power Plants                                                             | 3/77                | 2        |
| 1.33   | Quality Assurance Program Requirements (Operations)                                                                                     | 3/78                | 2        |
| 1.34   | Control of Electroslag Weld Properties                                                                                                  | 12/28/72            |          |
| 1.35   | Inservice Inspection of UngROUTED Tendons in Prestressed Concrete Containment Structures                                                | 1/76                | 2        |
| 1.36   | Nonmetallic Thermal Insulation for Austenitic Stainless Steel                                                                           | 2/23/73             |          |
| 1.37   | Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants             | 3/73                |          |
| 1.38   | Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants | 5/77                | 2        |
| 1.39   | Housekeeping Requirements for Water-Cooled Nuclear Power Plants                                                                         | 9/77                | 2        |
| 1.40   | Qualification Tests of Continuous-Duty Motors Installed Inside the Containment of Water-Cooled Nuclear Power Plants                     | 3/73                |          |
| 1.41   | Preoperational Testing of Redundant Onsite Electric Power Systems to Verify Proper Load Group Assignments                               | 3/73                |          |
| † 1.42 | Interim Licensing Policy on As-Low-As-Practicable for Gaseous Radioiodine Releases from Light-Water-Cooled Nuclear Power Reactors       | (withdrawn 3/22/76) |          |
| 1.43   | Control Stainless Steel Weld Cladding of Low-Alloy Steel Components                                                                     | 5/73                |          |
| 1.44   | Control of the Use of Sensitized Stainless Steel                                                                                        | 5/73                |          |
| 1.45   | Reactor Coolant Pressure Boundary Leakage Detection Systems                                                                             | 5/73                |          |
| 1.46   | Protection Against Pipe Whip Inside Containment                                                                                         | 5/73                |          |
| 1.47   | Bypassed and Inoperable Status Indication for Nuclear Power Plant Safety Systems                                                        | 5/73                |          |
| 1.48   | Design Limits and Loading Combinations for Seismic Category I Fluid System Components                                                   | 5/73                |          |
| 1.49   | Power Levels of Nuclear Power Plants                                                                                                    | 12/73               | 1        |
| 1.50   | Control of Preheat Temperature for Welding of Low-Alloy Steel                                                                           | 5/73                |          |

† Available at the NRC Public Document Room, 1717 H Street, N.W., Washington, D.C.

## REGULATORY GUIDES

| Number | Title                                                                                                                                                                                          | Date                | Revision |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------|
| †1.51  | Inservice Inspection of ASME Code Class 2 and 3 Nuclear Power Plant Components                                                                                                                 | (withdrawn 7/21/75) |          |
| 1.52   | Design, Testing, and Maintenance Criteria for Post-accident Engineered-Safety-Feature Atmosphere Cleanup System Air Filtration and Absorption Units of Light-Water-Cooled Nuclear Power Plants | 4/78                | 2        |
| 1.53   | Application of the Single-Failure Criterion to Nuclear Power Plant Protection Systems                                                                                                          | 6/73                |          |
| 1.54   | Quality Assurance Requirements for Protective Coatings Applied to Water-Cooled Nuclear Power Plants                                                                                            | 6/73                |          |
| 1.55   | Concrete Placement in Category I Structures                                                                                                                                                    | 6/73                |          |
| 1.56   | Maintenance of Water Purity in Boiling Water Reactors                                                                                                                                          | 8/78                | 1        |
| 1.57   | Design Limits and Loading Combinations for Metal Primary Reactor Containment System Components                                                                                                 | 6/73                |          |
| » 1.58 | Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel                                                                                                            | 9/80                | 1        |
| 1.59   | Design Basis Floods for Nuclear Power Plants                                                                                                                                                   | 8/77                | 2        |
| 1.60   | Design Response Spectra for Seismic Design of Nuclear Power Plants                                                                                                                             | 12/73               | 1        |
| 1.61   | Damping Values for Seismic Design of Nuclear Power Plants                                                                                                                                      | 10/73               |          |
| 1.62   | Manual Initiation of Protective Actions                                                                                                                                                        | 10/73               |          |
| 1.63   | Electric Penetration Assemblies in Containment Structures for Light-Water-Cooled Nuclear Power Plants                                                                                          | 7/78                | 2        |
| 1.64   | Quality Assurance Requirements for the Design of Nuclear Power Plants                                                                                                                          | 6/76                | 2        |
| 1.65   | Materials and Inspection for Reactor Vessel Closure Studs                                                                                                                                      | 10/73               |          |
| †1.66  | Nondestructive Examination of Tubular Products                                                                                                                                                 | (withdrawn 10/6/77) |          |
| 1.67   | Installation of Overpressure Protective Devices                                                                                                                                                | 10/73               |          |
| 1.68   | Initial Test Programs for Water-Cooled Nuclear Power Plants                                                                                                                                    | 8/78                | 2        |
| 1.68.1 | Preoperational and Initial Startup Testing of Feedwater and Condensate Systems for Boiling Water Reactor Power Plants                                                                          | 1/77                | 1        |

† Available at the NRC Public Document Room, 1717 H Street, N.W., Washington, D.C.



## REGULATORY GUIDES

| Number  | Title                                                                                                                                     | Date  | Revision |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|
| 1.143   | Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants | 10/79 | 1        |
| ➤ 1.144 | Auditing of Quality Assurance Programs for Nuclear Power Plants                                                                           | 9/30  | 1        |
| 1.145   | Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants                                      | 8/79  |          |
| 1.146   | Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants                                                       | 8/80  |          |

## REGULATORY GUIDES

### DIVISION 2 REGULATORY GUIDES RESEARCH AND TEST REACTORS

| Number | Title                                                                                                  | Date  | Revision |
|--------|--------------------------------------------------------------------------------------------------------|-------|----------|
| 2.1    | Shield Test Program for Evaluation of Installed Biological Shielding in Research and Training Reactors | 5/73  |          |
| 2.2    | Development of Technical Specifications for Experiments in Research Reactors                           | 11/73 |          |
| 2.3    | Quality Verification for Plate-Type Uranium-Aluminum Fuel Elements for Use in Research Reactors        | 7/76  | 1        |
| 2.4    | Review of Experiments for Research Reactors                                                            | 5/77  | 0-R      |
| 2.5    | Quality Assurance Program Requirements for Research Reactors                                           | 10/77 | 0-R      |
| 2.6    | Emergency Planning for Research Reactors<br><i>(comments requested by 4/6/79)</i>                      | 1/79  |          |

## REGULATORY GUIDES

| Number | Title                                                                                                                       | Date  | Revision |
|--------|-----------------------------------------------------------------------------------------------------------------------------|-------|----------|
| 8.23   | Radiation Safety Surveys at Medical Institutions ( <i>comments requested by 4/12/79</i> )                                   | 2/79  |          |
| 8.24   | Health Physics Surveys During Enriched Uranium-235 Processing and Fuel Fabrication ( <i>Comments requested by 1/25/79</i> ) | 10/79 | 1        |
| 8.25   | Calibration and Error Limits of Air Sampling Instruments for Total Volume of Air Samples                                    | 8/80  |          |
| ➤ 8.26 | Applications of Bioassay for Fission and Activation Products                                                                | 9/30  |          |

## REGULATORY GUIDES

### DIVISION 9 REGULATORY GUIDES ANTITRUST AND FINANCIAL REVIEW

| Number | Title                                                                                                                                                   | Date  | Revision |
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| 9.1    | Regulatory Staff Position Statement on Antitrust Matters                                                                                                | 12/73 |          |
| 9.2    | Information Needed by the NRC Staff in Connection<br>With Its Antitrust Review of Construction Permit<br>Applications for Nuclear Power Plants          | 6/76  | 1        |
| 9.3    | Information Needed by the NRC Staff in Connection<br>With Its Antitrust Review of Operating License<br>Applications for Nuclear Power Plants            | 10/74 |          |
| 9.4    | Suggested Format for Cash Flow Statements Submitted as Guarantees<br>of Payment of Retrospective Premiums ( <i>comments requested by<br/>11/20/78</i> ) | 9/78  |          |



## SYSTEMS OF RECORDS

### SYSTEM MANAGER(S) AND ADDRESS:

Director, Management Development and Training Staff, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Record access procedures: Same as "Notification procedure."

Contesting record procedures: Same as "Notification procedure."

### RECORD SOURCE CATEGORIES:

Information is provided by the individual to whom it applies, the employee's supervisor, and training groups, agencies, or educational institutions.

### NRC-20

System name: Official Travel Records—NRC

### SYSTEM LOCATION:

Primary system—Office of the Controller, NRC, 4922 Fairmont Avenue, Bethesda, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Part 1 and Part 2, and at the NIH computer facility, Bethesda, Maryland.

Categories of individuals covered by the system: NRC employees, prospective NRC employees, consultants, and invitational travelers for NRC programs.

Categories of records in the system: These records contain Request and Authorization for Official Travel forms, Travel Advance Worksheet, Travel Vouchers and Vouchers for Professional Services, Travel and Miscellaneous Expenses from consultants.

Authority for maintenance of the system:

- a. 31 U.S.C. 21, 22, 24, 49, 54, 86a, and 952 (1976);
- b. 5 U.S.C. 5701 (1976);
- c. Federal Travel Regulations, Federal Property Management Regulations, Part 101-7.

Routine uses of records maintained in the system, including categories of users and the purposes of such uses: Information in these records may be used:

- a. For transmittal to the U.S. Treasury for payment;

- b. For transmittal to the Department of State or an embassy for passports or visas;

- c. For quarterly report to General Services Administration of individuals approved for first class travel; and

- d. For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

### STORAGE:

Maintained on paper in file folders, on disks, and on magnetic tape.

Retrievability: Records are accessed by name, social security account number, authorization number, estimated travel start day, authorization process day, and voucher process day.

### SAFEGUARDS:

Maintained in locked file cabinets in same room as users. For ADP records, a key word, initials, and NRC Office of the Controller's account number must be known in order to retrieve information.

Retention and disposal: Retained for 3 years, then destroyed through regular trash disposal system.

### System manager(s) and address:

Controller  
Office of the Controller  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Record access procedures: Same as "Notification procedure."

Contesting record procedures: Same as "Notification procedure."

Record source categories: Information is provided by the individual, the organizational component approving the travel, outside transportation agents and rate books for cost information.

### NRC-21

System name: Payroll Accounting Records—NRC

System location: Primary system—Office of the Controller, NRC, Lugenbeel Building, 4922 Fairmont Avenue, Bethesda, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Part 1 and Part 2, and at the Department of Energy Computer Facility, Germantown, Maryland.

Categories of individuals covered by the system: NRC employees.

Categories of records in the system: Pay, leave, and allowance histories.

Authority for maintenance of the system: 31 U.S.C. 21, 22, 24, 49, 54, 66a, and 952 (1976).

Routine uses of records maintained in the system, including categories of users and the purposes of such uses: Information in these records may be used:

- a. For transmittal of data to U.S. Treasury to effect issuance of paychecks to employees and distribution of pay according to employee directions for savings bonds, allotments, financial institutions, and other authorized purposes;

- b. For reporting tax withholding to Internal Revenue Service and appropriate state and local taxing authorities;

- c. For FICA deductions to the Social Security Administration;

- d. For dues deductions to labor unions;

- e. For withholdings for health insurance to the insurance carriers and the Office of Personnel Management;

- f. For charity contribution deductions to agents of charitable institutions;

- g. For annual W-2 statements to taxing authorities and the individual;

- h. (When P.L. 93-579 becomes effective, it is anticipated that appropriate statements will be issued to employees, spouse-recipients, and the courts involved);

- i. For transmittal to the Office of Management and Budget for review of budget requests;

- j. For transmittal of data to the Department of Energy for preparing computer material for NRC's transmittal of data to the U.S. Treasury;

- k. For withholding and reporting of retirement, reemployed annuitants and life insurance information to the Office of Personnel Management;

- l. For transmittal of information to State agencies for unemployment purposes; and

- m. For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

### STORAGE:

File folders, microfiche, magnetic tapes, and disks.

### RETRIEVABILITY:

ACCESSED BY NAME AND SOCIAL SECURITY NUMBER.

## SYSTEMS OF RECORDS

### SAFEGUARDS

File folders, microfiche, tapes, and disks, including backup data, are maintained in locked cabinets in secured locked rooms after working hours. Access to and use of these records are limited to those persons whose official duties require such access.

### RETENTION AND DISPOSAL:

File folders are retained for four years after transfer or separation of an employee, then destroyed by shredding. ADP information is retained on disks for one year, transferred to and retained on magnetic tape for three years; then the tape is erased.

### System manager(s) and address:

Controller, Office of the Controller  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Record access procedures:** Same as "Notification procedure."

**Contesting record procedures:** Same as "Notification procedure."

**Record source categories:** Information is provided by the individual and the Division of Organization and Personnel.

### NRC-22

**System name:** Personnel Performance Appraisals-NRC

### SYSTEM LOCATION:

Division of Organization and Personnel, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

**Categories of individuals covered by the system:** NRC employees, including candidates who apply for job vacancies under the NRC vacancy announcement system.

**Categories of records in the system:** This system of records contains evaluations of applicants and employees, evaluation criteria and methods, employee placement follow-up interview reports, appraisals from other individuals who are knowledgeable of the applicant's abilities, supervisory appraisals of performance and

career development potential, and other related records.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

Section 161(d), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201(d) (1976).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used:

- By the Office of Personnel Management and Merit Systems Protection Board to resolve grievances or complaints related to promotion or appointment selections; and
- For any of the routine uses specified in the Prefatory Statement.

**Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:**

### STORAGE:

Maintained on paper in file folders.

**Retrievability:** Records are accessed by name.

### SAFEGUARDS:

Maintained in locked file cabinets. Access to and use of these records are limited to those persons whose official duties require such access.

### RETENTION AND DISPOSAL:

Retained 1 year, or until subsequent rating is prepared, whichever is later.

### System manager(s) and address:

Chief, Personnel Operations Branch  
Division of Organization and Personnel  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Record access procedures:** Same as "Notification procedure."

**Contesting record procedures:** Same as "Notification procedure."

### RECORD SOURCE CATEGORIES:

Individual to whom record pertains and employee's supervisors.

### NRC-23

**System name:** Personnel Research and Test Validation Records-NRC

Pursuant to 5 U.S.C. 552a(k)(6), the Commission has exempted portions of

this system of records from 5 U.S.C. 552a (c)(3), (d), (e)(1), (e)(4)(G), (H) and (I) and (f). The exemption rule is contained in Section 9.95 of the NRC regulation (10 CFR 9.95).

### SYSTEM LOCATION:

Primary system-Division of Organization and Personnel, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

Duplicate system-duplicate systems exist, in whole or in part, at the Department of Energy computer facility, Germantown, Maryland.

**Categories of individuals covered by the system:** NRC employees and applicants for NRC employment.

**Categories of records in the system:** These records include education and employment history, test scores, responses to test items and questionnaires, interview data and ratings of supervisors regarding the individuals to whom the records pertain. Data are collected on a project basis and are used for the construction, analysis and validation of written tests; for research on personnel measurement and selection methods and techniques and research on personnel management practices such as performance evaluation or productivity.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

a. Section 161(d), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201(d) (1976);

b. 44 U.S.C 3101 (1970).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used:

a. To exchange between the NRC, Office of Personnel Management and Merit Systems Protection Board, and other Federal agencies for personnel research purposes and used to aid in identifying employees included in research studies that extend over a period of time; and

b. For any of the routine uses specified in the Prefatory Statement.

**Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:**

**Storage:** Records are maintained in file folders, on punched cards, computer tape, and computer storage.

**Retrievability:** Records are maintained by project. Personnel information can be retrieved by name or personal identifier

UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

COMMISSION NOTICES

PROPOSED SYSTEMS OF RECORDS

45 FR 19104

Published 3/24/80

Comment period expires 4/23/80

**Privacy Act of 1974; Systems of Records; Minor Amendments**

**AGENCY:** United States Nuclear Regulatory Commission (NRC).

**ACTION:** Proposed Minor Amendments of Systems of Records.

**SUMMARY:** The Nuclear Regulatory Commission is proposing minor amendments to the NRC Systems of Records, NRC-19. The amendments clarify and update the information contained in the NRC Systems of Records, necessitated by adding the Senior Executive Service training records to existing NRC training records.

**COMMENT DATE:** Comments are due on or before April 23, 1980.

**ADDRESS:** Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch.

**FOR FURTHER INFORMATION CONTACT:** Sarah N. Wigginton, FOI/PA Branch, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission. Phone: (301) 492-8133.

**SUPPLEMENTARY INFORMATION:** In accordance with the Privacy Act of 1974, the Nuclear Regulatory Commission has published notices of those systems of records maintained by the NRC which contain personal information about individuals and from which such information can be retrieved by an individual identifier. The notices were published as a document subject to publication in the annual compilation of Privacy Act documents.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 552a of Title 5 of the United States Code, as amended, notice is hereby given that adoption of the following amendments to the NRC

System of Records is contemplated. All interested persons who desire to submit written comments or suggestions for consideration in connection with the proposed amendments should send them to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch by April 23, 1980. Copies of comments on the proposed amendments may be examined at the Commission's Public Document Room at 1717 H Street, NW., Washington, DC.

1. The paragraphs of NRC-19 entitled "Categories of individuals covered by the system," "Categories of records in the system," "Authority for maintenance of the system," "Routine uses of records maintained in the system, including categories of uses and the purposes of such uses," "Retention and disposal," and "Record source categories" are amended to read as follows:

**NRC-19**

**SYSTEM NAME:**

Official Personnel Training Records—NRC

**CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:**

Individuals who have applied for or were selected for either NRC or other government/nongovernment training courses or programs, including the NRC Senior Executive Service Candidate Development Program.

**CATEGORIES OF RECORDS IN THE SYSTEM:**

These records contain information relating to the individual's educational background, work experience, performance appraisals, and training courses, including applications for training, training requests, authorizations for training, course grades, evaluations, and other related

personnel information and correspondence.

**AUTHORITY FOR MAINTENANCE OF THE SYSTEM:**

- a. 5 U.S.C. 4103 (1976);
- b. E. O. 11348, April 20, 1967, as amended by E. O. 12107, December 28, 1978;
- c. Civil Service Reform Act of 1978, Pub. L. 95-454 (5 U.S.C. 4311 et seq.);
- d. 5 U.S.C. 3396 (October 13, 1978).

**ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:**

- a. Information may be extracted from the records and made available to the Office of Personnel Management; other Federal, state and local government agencies; and educational institutions for use in training programs related to NRC employees.
- b. Information in these records may be disclosed for the routine uses specified in paragraph numbers 5 and 6 of the Prefatory Statement.

**RETENTION AND DISPOSAL:**

Retained for 5 years, or until no longer needed, then destroyed by shredding.

**RECORD SOURCE CATEGORIES:**

Information is provided by the individual to whom it applies, the employee's supervisors, and training groups, agencies, or educational institutions.

## PROPOSED SYSTEMS OF RECORDS

Systems into two sections. The additional section will incorporate the new Senior Executive Service into the System and establish a separate System location.

**COMMENT DATE:** Comments are due on or before May 15, 1980.

**ADDRESS:** Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch.

**FOR FURTHER INFORMATION CONTACT:** Sarah N. Wigginton, FOI/PA Branch, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Phone: (301) 492-8133.

**SUPPLEMENTARY INFORMATION:** In accordance with the Privacy Act of 1974, the Nuclear Regulatory Commission has published notices of those systems of records maintained by the NRC which contain personal information about individuals and from which such information can be retrieved by an individual identifier. The notices were published as a document subject to publication in the annual compilation of Privacy Act documents.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 552a of Title 5 of the United States Code, as amended, notice is hereby given that adoption of the following amendments to the NRC System of Records is contemplated. All interested persons who desire to submit written comments or suggestions for consideration in connection with the proposed amendments should send them to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch by May 15, 1980. Copies of comments on the proposed amendments may be examined at the Commission's Public Document Room at 1717 H Street, N.W., Washington, DC.

1. System of Records NRC-22, "Personnel Performance Appraisals—NRC," is amended to read as follows:

### NRC-22

#### SYSTEM NAME:

Personnel Performance Appraisals—NRC: Part A, GG-15 employees and below; Part B, Senior Executive Service and equivalent employees.

#### SYSTEM LOCATION:

Part A: Division of Organization and Personnel, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

Part B: Chairman, Performance Review Board, 7735 Old Georgetown

45 FR 25558  
Published 4/15/80  
Comment period expires 5/15/80

### Privacy Act of 1974; Notices of System of Records, Proposed Minor Amendments

**AGENCY:** United States Nuclear Regulatory Commission.

**ACTION:** Proposed Minor Amendments of Systems of Records.

**SUMMARY:** The Nuclear Regulatory Commission is proposing minor amendments to the NRC Systems of Records, NRC-22. The amendments clarify and update the information contained in the NRC Systems of Records, necessitated by the division of the Personnel Performance Appraisals



## PART 30 • STATEMENTS OF CONSIDERATION

44 FR 30076  
Published 5/24/79  
Effective 6/5/79

### 10 CFR Parts 30, 40, and 70

#### Domestic Licensing; Timely Notification of Discontinued Licensed Activities

**AGENCY:** U.S. Nuclear Regulatory Commission (NRC).

**ACTION:** Approval of reporting requirement by Comptroller General.

**SUMMARY:** On March 22, 1979, the Nuclear Regulatory Commission published in the *Federal Register* a notice of rule making, effective June 5, 1979 amending its regulations to require licensees to notify the Commission when they decide to permanently discontinue all activities involving materials authorized under a license.

The notice included the following note:

**Note.**—The Nuclear Regulatory Commission has submitted this rule to the Comptroller General for review under the Federal Reports Act, as amended, 44 U.S.C. 3512. The date on which the rule becomes effective, unless advised to the contrary, accordingly reflects inclusion of the 45 day period which that statute allows for this review (44 U.S.C. 3512(c)(2)).

**EFFECTIVE DATE:** June 5, 1979. The reporting requirements set out in the notice of rule making amending 10 CFR Parts 30, 40, and 70 which was published in the *Federal Register* on March 22, 1979 (44 FR 17479) have been approved or cleared by the U.S. General Accounting Office.

**FOR FURTHER INFORMATION CONTACT:** Gerald L. Hutton, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, telephone 301-492-7086.

45FR14199  
Published 3/5/80  
Effective 3/5/80

*Minor and Clarifying Amendments*

See Part 1 Statements of Consideration

45 FR 18905  
Published 3/24/80  
Effective 3/24/80

*Deletion of Reference to Panama Canal Zone; Minor Amendments*

See Part 4 Statements of Consideration.

45 FR 41393  
Published 6/19/80  
Effective 9/2/80

### 10 CFR Parts 30 and 35

#### Testing of Radioisotope Generators

**AGENCY:** Nuclear Regulatory Commission (NRC).

**ACTION:** Final rule.

**SUMMARY:** Certain Nuclear Regulatory Commission (NRC) medical licensees are authorized to prepare radioactive drugs from radioisotope generators. NRC is requiring licensees to test these radioactive drugs for a contaminant called molybdenum-99. NRC is also imposing maximum limits for molybdenum-99 in these radioactive drugs. Following a report from an NRC medical licensee, a joint NRC/FDA investigation revealed the possibility of greater than normal quantities of molybdenum-99 in technetium-99m (Tc-99m) generator eluate. The presence of molybdenum-99 serves no diagnostic purpose. Therefore, the radiation exposure from the administration of greater than normal amounts of molybdenum-99 is unnecessary to the patient.

**EFFECTIVE DATE:** September 2, 1980.

**Note.**—NRC has submitted this rule to the Comptroller General for review under the Federal Reports Act, as amended, 44 U.S.C. 3512. The date on which the rule becomes effective reflects inclusion of the 45-day period that the statute allows for this review (44 U.S.C. 3512(c)(2)).

**FOR FURTHER INFORMATION CONTACT:** Edward Podolak, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Telephone: 301-443-5860).

**SUPPLEMENTARY INFORMATION:** In diagnostic nuclear medicine, the most widely used radioactive drug is technetium-99m (Tc-99m) which has a radioactive half-life of 6 hours. Many hospitals and nuclear pharmacies obtain their Tc-99m by purchasing a radionuclide generator from a radioactive drug manufacturer and eluting the generator.

The radioisotope generator is a shielded device that is often called a

molybdenum generator or molybdenum "cow" because molybdenum-99 (Mo-99), the parent of Tc-99m, is contained within the generator. The Mo-99 is adsorbed on an alumina column which is arranged so that sterile saline solution can be fed through the column to wash out, or elute, only the daughter radioisotope, Tc-99m. The parent, Mo-99, has a longer half-life than the daughter, Tc-99m, and the parent continuously decays to form the daughter radioisotope, which is eluted when needed. The generator is usually eluted, or "milked," every 24 hours and replaced with a new generator once a week because the parent, Mo-99, has decayed below useful levels. If the Mo-99 is improperly loaded on the alumina column or loaded on an alumina column that is defective (e.g., improper packing could cause "channeling" of the Mo-99), the Mo-99 will "break through" the column and contaminate the radioactive drug.

The *United States Pharmacopeia (USP) XIX*, which is recognized by the Food and Drug Administration (FDA) and the pharmaceutical industry as the basic standard for drug strength, quality and purity, has upper limits for the presence of Mo-99 in Tc-99m radioactive drugs. These limits apply to molybdenum generator manufacturers and each generator's labeling includes methods or references methods for quantifying the amount of Mo-99 in Tc-99m. This is usually called a molybdenum breakthrough test.

Molybdenum breakthrough testing by the generator user has always been considered a good laboratory practice or a good quality control measure. In a section describing molybdenum breakthrough testing, the Bureau of Radiological Health (FDA) "*Workshop Manual on Radiopharmaceutical Quality Assurance*" (July 1978) states: "Thus, it is important that testing for Mo-99 be performed routinely."

Until 1975, all NRC medical licenses authorizing the use of generators included a license condition requiring molybdenum breakthrough testing. A provision in the new § 35.14 group medical licensing regulations, adopted in 1975, ultimately had the effect of dropping this license condition. Section 35.14(b)(4) requires licensees to follow the generator labeling or package inserts which, in 1975, included methods for molybdenum breakthrough testing. Over the intervening years, generator labeling has become ambiguous on molybdenum breakthrough testing. Some package inserts imply that the users *should* do it, others imply that the users *are* doing it, and still others *recommend* that the users do it. Thus, there are no uniform requirements in NRC licenses or

## PART 30 • STATEMENTS OF CONSIDERATION

regulations or in connection with the generator labeling for the performance of tests to determine the amount of Mo-99 in Tc-99m radioactive drugs before administration to patients.

Following a report from an NRC medical licensee, a joint NRC/FDA investigation in March 1979 revealed the possibility of greater than normal quantities of Mo-99 in Tc-99m generator eluate. The presence of molybdenum-99 serves no diagnostic purpose. Therefore, the radiation exposure resulting from the administration of greater than normal amounts of Mo-99 is unnecessary radiation exposure to patients. It could result in a radiation dose to a critical organ of one or more rems. There are several thousand generators shipped weekly, with each generator accounting for up to 50 patient dosages per day. If a problem develops in the manufacture, shipping, handling or elution of these generators that results in molybdenum breakthrough in excess of the USP XIX limits, there is a potential for unnecessary radiation exposure of patients.

In view of this, on March 12, 1979, NRC's Office of Nuclear Materials Safety and Safeguards issued an order requiring medical licensees to perform molybdenum breakthrough testing on each elution of Tc-99m from a generator and also prohibiting licensees from administering any Tc-99m radioactive drugs that exceed the USP XIX limits for Mo-99 contamination. On June 6, 1979, the Commission published in the *Federal Register* (44 FR 32394) a proposed rule that contained the essentials of that order. The March 12, 1979, order to licensees requiring molybdenum breakthrough testing remained in effect. That order is hereby rescinded by the terms of this final rule when it becomes effective.

The comment period for the proposed rule expired on August 6, 1979. Three comments were received. Two commenters favored the proposed rule. One of these commenters suggested a minor word change to clarify that the required test applies only to Mo-99/Tc-99m generators. This change was

adopted in the final rule. One commenter, while agreeing that molybdenum breakthrough testing was necessary, suggested that the FDA change the generator labeling to mandate the test. The NRC believes that an NRC requirement for molybdenum breakthrough testing is more direct and effective than an FDA labeling change. FDA does not impose requirements on users of radioactive drugs through the product labeling.

The final rule covers three types of NRC medical licenses: (1) the nuclear

pharmacy license, (2) the broad medical license and (3) the group medical license. Of these three types of medical licensees, the rule applies only to those who actually elute the radioisotope generators and does not apply to those who purchase prepared Tc-99m radioactive drugs from a radiopharmaceutical manufacturer or nuclear pharmacy. The manufacturer that sells prepared Tc-99m radiopharmaceuticals is covered by FDA requirements for molybdenum breakthrough testing. As noted above, nuclear pharmacies are covered by the rule.

In summary, § 35.14(b)(4) requires the group medical licensees to perform molybdenum breakthrough tests if they use generators. Section 30.34(g) requires nuclear pharmacy licensees and broad medical licensees to perform the same molybdenum breakthrough tests if they use generators.

Under the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Parts 30 and 35 are published as a document subject to codification.

➤ 45 FR 65521

Published 10 /3/80

Effective 11/17/80

### 10 CFR Parts, 30, 40, 70, and 150

#### Uranium Mill Licensing Requirements

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rules.

**SUMMARY:** The U.S. Nuclear Regulatory Commission is amending its regulations to specify licensing requirements for uranium and thorium milling activities, including tailings and wastes generated from these activities. The amendments to Parts 40 and 150 take into account the conclusions reached in a final generic environmental impact statement on uranium milling<sup>1</sup> and the requirements mandated in the Uranium Mill Tailings Radiation Control Act of 1978, as

<sup>1</sup> Copies of the final generic environmental impact statement on uranium milling (NUREG-0706) are available for public inspection and copying at the U.S. Nuclear Regulatory Commission's Public Document Room, 1717 H St NW, Washington, D.C. 20555. Copies also available from GPO Sales Program, Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 and the National Technical Information Service, Springfield, Virginia 22101.

amended, public comments received on a draft generic environmental impact statement on uranium milling,<sup>2</sup> and public comments received on proposed rules published in the *Federal Register*. The amendments to 10 CFR Part 40 specify technical, surety, ownership, and long term care criteria for the management and final disposition of mill tailings. The amendments to 10 CFR Parts 30 and 70 are for consistency to require the completion of an environmental review by the NRC prior to the commencement of construction of certain other types of nuclear plants, such as uranium hexafluoride conversion plants or uranium processing and fuel fabrication plants. The amendments to 10 CFR Part 150 enumerate the authorities reserved to the Commission in Agreement States under the provisions of the Uranium Mill Tailings Radiation Control Act, and specify requirements for Agreement States to implement this Act.

**EFFECTIVE DATE:** November 17, 1980.

**Note.**—The NRC has submitted this rule to the Comptroller General for such reviews as may be appropriate under the Federal Reports Act, as amended, 44 U.S.C. 3512. The date on which the reporting and recordkeeping requirements of this rule become effective, unless advised to the contrary, accordingly reflects inclusion of the 45 day period which that statute allows for such review (44 U.S.C. 3512(c)(2)).

**FOR FURTHER INFORMATION CONTACT:** Mr. Don F. Harmon, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301-443-5910).

#### SUPPLEMENTARY INFORMATION:

##### I. Introduction

In November 1978, the U.S. Congress enacted the Uranium Mill Tailings Radiation Control Act (UMTRCA). This Act provides a program to regulate mill tailings during uranium or thorium oreprocessing at active mill operations and after termination of operations to stabilize and control tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public. In April 1979, the NRC published (44 FR 24983) for comment a draft generic environmental impact statement (GEIS) on uranium milling that assessed the potential environmental impacts of uranium milling operations, including the management of uranium mill tailings. The NRC wished to provide an opportunity for public participation in decisions concerning any proposed changes in NRC regulations based on that assessment.

On August 24, 1979, the Commission published in the *Federal Register*

<sup>2</sup> The draft statement (NUREG-0811) was published in April 1979 (44 FR 24983).

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effective (44 FR 50012) and proposed (44 FR 50015) amendments to its regulations to implement the requirements of the UMTRCA and the conclusions reached in the draft GEIS on uranium milling. In October, 1979, the NRC staff held public hearings in Denver, Colorado, and Albuquerque, New Mexico, to obtain additional public input on the proposed rule changes and the draft GEIS.

The August 24, Federal Register notice indicated certain of the effective rules were to: (1) govern the Commission's licensing of byproduct material (i.e., uranium mill tailings) in Agreement States; (2) provide for a general license authorizing possession of uranium mill tailings by certain persons in Agreement States to prevent existing milling operations from being in technical violation of the Atomic Energy Act; and (3) specify that individuals in Agreement States were not exempt from Commission licensing requirements governing uranium mill tailings. Legislation was enacted on November 9, 1979 (Pub. L. 96-106) to provide clarification to Sections 204(h) and 204(e) of the UMTRCA. This legislation provided that the Commission has no direct licensing authority over byproduct material licensed by Agreement States at least until November 8, 1981. Accordingly, to conform to the requirements of Pub. L. 96-106, the Commission revoked the foregoing effective rules in a Federal Register notice published February 26, 1980 (45 FR 12377).

### II. Public Response to Draft GEIS and Proposed Rules

The Commission received ninety-nine submittals in response to the request for comments on the draft GEIS and the August 24 Federal Register notice. These documents were from private individuals, uranium milling companies, trade associations, state and Federal agencies, and conservation and public interest groups. In addition, about 50 individuals, representing views of the same spectrum of groups and individuals, presented statements at the Denver and Albuquerque public hearings. The NRC staff has systematically reviewed all comments received and the transcripts of the statements presented at the public hearing and has identified approximately 1500 substantive comments on the draft GEIS and proposed rule changes.

After careful consideration of all comments, the NRC staff has prepared a final generic environmental impact statement on uranium milling and the Commission has adopted the rules supported by this document. These rules are identified and discussed below. In

preparing the final GEIS, the NRC has included the latest available nuclear power and uranium milling projections obtained from the U.S. Department of Energy and has completely reviewed treatment of the following: (1) potential individual and population exposures to radioactive materials from milling activities; (2) potential health effects resulting from these exposures; (3) costs for various management and disposal alternatives; and (4) a cost benefit analysis of the effective rule changes. It also contains a new Appendix A which provides a discussion of each of the specific substantive public comments. The summary of the final GEIS provides, among other things, a general discussion of what are believed to be the major public concerns and issues raised in public comments. Appendix A and the summary of the final GEIS also contain a more detailed discussion of the significant changes appearing in the final rule changes set forth below.

Since all substantive public comments are addressed in detail in Appendix A of the final GEIS and since it is impracticable to provide here a complete summary discussion of all the complex issues raised in public comments, only those issues which the NRC staff believes cover major public concerns are discussed below.

The Commission is fully aware that Atomic Safety and Licensing Appeal Boards are now considering, in individual adjudicatory licensing proceedings and pursuant to Commission direction, issues pertaining to the environmental effects of radon releases associated with the mining and milling of uranium. It is also aware that some of the issues being adjudicated in those proceedings overlap some of the subjects which are discussed in the GEIS.

Notwithstanding its issuance at this time of a final rule imposing licensing requirements for uranium mills (including the disposal of the tailings generated in the milling process), the Commission intends that the Appeal Boards proceed to decision on all issues pending before them in the radon release proceedings. In so doing, the Appeal Boards are to base their decision on the adjudicatory record of those proceedings. To the extent, if any, that, in the judgment of the Appeal Boards, the adjudicatory record may call for findings different from those contained in the GEIS and reflected in the final rule, the Appeal Boards will be free both to make and to implement such findings in their decision.

The Appeal Boards' decision will, of course, be subject to review by the Commission either on petition of a party to the proceedings or on its own initiative. In the course of any such review, the Commission will have the

opportunity to examine any findings made by the Appeal Boards which are or might be inconsistent with those GEIS findings underlying the final rule which is now being adopted. Depending upon its resolution of the inconsistency, the Commission may then either (1) reverse or modify the Appeal Boards' decision; or (2) amend the final rule to bring it into conformity with that decision.

In determining to promulgate the final rule at this time despite the possible need for its revision following the conclusion of the adjudicatory proceedings concerned with radon releases, the Commission has heavily influenced by the consideration that prompt issuance of the rule is imperative to ensure that, by November 8, 1981, Agreement States will be able to take that action necessary to bring their byproduct and source material licensing programs into compliance with Section 274c of the Atomic Energy Act of 1954, as amended. In this connection, although not prejudging the outcome of the pending adjudication, the Commission believes that the GEIS provides a sufficient basis for the issuance of a final rule without further delay, subject to later possible amendment.

### III. Major Issues Addressed in Public Comments

#### *Timing of Regulations*

A number of commenters took the position that there is no great sense of urgency for regulations on uranium mill tailings management and mill operations. However, each year new mills are proposed and many millions of tons of tailings are generated at existing mills. As new mills are constructed and more tailings are generated, the options for dealing with tailings disposal become fewer. It is critically important that the siting and design criteria of the regulations be implemented for new facilities so that mistakes of the past are not repeated. In addition, and perhaps even more important, radioactive releases from existing mills constitute the largest potential routine releases from the nuclear fuel cycle. Therefore, it is absolutely essential that regulations, which assure that action is taken to protect the public health and safety, are promulgated promptly.

The NRC intends to promulgate the regulations recognizing that research, much of its sponsored by NRC, is still being conducted in many areas covered in the rules. The regulations are established on the basis of knowledge obtained from licensing experience and research conducted to date. Research sponsored by NRC, DOE, the industry,



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and others will continue, and changes can be made to regulations if research indicates that changes are necessary or appropriate. However, the NRC considers it likely that information from this research will provide a basis for supplementing the broad criteria of the regulations with more specific regulatory guidance rather than a change in the overall objective of any criterion. In any case, the NRC considers it urgent to issue the regulations now, but expects to review them from time to time to assess whether any changes are warranted.

A number of commenters indicated that their interpretation of the UMTRCA was that EPA was required to develop standards before NRC promulgated its rules. Section 275 of the Atomic Energy Act, as amended by the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA), requires EPA to issue environmental and health standards for uranium mill tailings. However, an analysis of the Mill Tailings Act and its legislative history indicates that the Commission not only has the authority but also the immediate duty to insure that the management of uranium mill tailings is carried out in a manner that will protect the public health and safety and the environment.

Although NRC could have delayed developing regulations until EPA issued standards, that would have left unfinished the program to develop rules which NRC has been working on for nearly three years. In addition, a delay would have made it difficult, if not impossible, for the Agreement States to issue equivalent standards as required. It is clear from the UMTRCA that NRC's minimum Federal standards must be promulgated as promptly as possible so that the Agreement States will be able to have equivalent regulations in place by November 8, 1981.

NRC is aware that its regulations must be compatible with the generally applicable standards established by EPA; therefore, the NRC staff has been and will continue to coordinate closely with EPA on this matter. NRC regulations will be revised, if required, when EPA standards are issued.

### *Application of Regulations at Existing Sites*

A number of commenters stated that tailings disposal criteria should not be applied too strictly at existing sites. Other commenters were concerned that regulations should be more specific about how the criteria will apply to these sites. In the latter case, the concern was that remedial action must be taken at existing sites where criteria are not met.

Regulations were developed recognizing that it may not be practicable to provide the same measures of conservation at existing sites as can be done at new sites where alternatives are not limited. Certain requirements in the regulations represent minimum levels of protection of public health, safety, and the environment. These requirements can and must be met in all cases. For example, requirements for minimum tailings cover, erosion protection, financial surety provisions, and the broad requirement that no ongoing active maintenance be needed to preserve the tailings isolation are mandatory in all cases. It would not be possible, on the other hand, to line the bottom of an existing tailings impoundment. Also, objectives concerning remoteness from people, providing below-grade burial, and transferring ownership of sites, may not be met to the same degree at an existing site as at a new site.

At some point, a determination, based on how a site measures up against all of the criteria, must be made as to whether the tailings should be relocated from an existing to a new site, or that, while it would be acceptable for existing tailings to be stabilized in place, tailings generated in the future should be deposited at a new location. The conditions which would lead to this determination cannot be spelled out in generic fashion in regulations because they are so variable. In any event, a full evaluation of tailings disposal and alternative sites must be completed at each milling operation and final plans formulated through a public decision making process such as is provided for by NEPA and UMTRCA.

### *Form of Regulations*

Some commenters stated that the regulations are too specific and inflexible and, thus, restrict operators from finding new and cost effective ways to meet broad goals at any particular site. For example, some felt that regulations should only state that groundwater quality must be protected and not be specific about methods of accomplishing this. On the other hand, others considered regulations should be more specific on certain issues. For example, some wanted regulations to specify, in numerical terms, allowable hydrologic, topographic and drainage conditions.

The NRC has developed regulations mindful of the need to avoid being overly restrictive. The NRC's experiences over the past several years, working with interim tailings management performance objectives

similar in nature to the criteria contained in the following rules, has been that the industry can develop many innovative ways of achieving broad goals. Also, the NRC recognizes, as stated throughout the draft and final generic impact statements, that the problem of tailings management is highly site specific. The precise details of a program can be worked out only when unique conditions of a site are known. For example, the extent of potential groundwater impacts, or the erosion potential of a tailings disposal program depends critically upon topographic, geologic, hydrologic, and meteorologic conditions which can vary significantly from site to site. The rules have been developed with flexibility to reflect this fact.

On the other hand, the NRC has attempted to make the rules as specific as possible within the constraints noted above. This is necessary for the following reasons: (1) for fairness to applicants and mill operations in that it reduces uncertainty about what requirements are and thus allows them to plan their operations reasonably; (2) to assure consistency in application of requirements which would not occur if the rules are too broad; and (3) to ensure that a minimum level of protection is provided where there are known problems or large uncertainties about potential problems. For example, a minimum cover thickness is specified and criteria for surface stabilization are established to account for known problems which potentially threaten long term tailings cover performance.

### *Scope of the GEIS*

There were numerous comments criticizing the "model mill" approach taken by the NRC in analyzing potential environmental impacts. More specifically, commenters pointed to various aspects of the mill that were not representative of a certain, real mill, or criticized lack of analysis of certain conditions or impacts which have arisen in specific cases.

However, as repeatedly noted in the GEIS, the factors which determine the extent of impacts from milling operations are extremely site specific. All of the variations which exist with regard to these factors could in no way be taken into account explicitly in the GEIS. The model mill and model site were described, and subsequent analysis of them was carried out, in enough detail to: (1) identify the major issues or impacts of concern with uranium milling and tailings disposal, and (2) characterize their nature and extent. Costs and benefits of alternatives for mitigating these impacts



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were evaluated. The product of these analyses is as new regulation, cast primarily in the form of performance objectives which recognizes that the precise methods or combination of methods of impact mitigation can only be worked out on a case-by-case basis where all unique, site specific conditions can be accounted for.

The NRC did a comprehensive review of existing conditions in all of the current uranium milling regions in developing the model mill and site, and in performing the analysis of the GEIS in general. This was done to assure that the major differences in conditions from those assumed for the GEIS models were known in performing the analysis. Where these differences are important in terms of specific points in regulations, such as radon flux limits, the full range of variability in conditions has been explicitly evaluated to assure it is reasonable to apply the regulations at all sites.

Because major decisions concerning siting and design remain to be made for each case once needed site-specific information is available, and because of the significant and longevity of the potential hazards associated with uranium mill tailings, a comprehensive environmental assessment of each mill and tailings waste disposal operation and alternatives must be conducted. It is also essential that this alternative assessment be conducted so there is opportunity for full public scrutiny of the decision being made. NRC regulations, 10 CFR 51, assures that this is done. UMTRCA (Pub. L. 95-604) establishes a requirement that Agreement States do the same. The regulation has been designed to assure these assessments are supported by full environmental assessments and investigation of site conditions by applicants and mill operators.

In no way is the GEIS a substitute for site-specific environmental assessments.

### *Siting of Mills*

Many commenters expressed the need to be more specific and stringent concerning siting requirements. For example, some wanted a specific definition of what would be accepted as a "remote" site, a term used in the proposed rules.

However, the matter of tailings disposal is not a one-dimensional problem; that is, several factors must be considered simultaneously. Too much specificity would be imprudent since, for example, establishing a minimum distance to population centers might unduly constrain efforts to deal with other concerns such as protecting groundwater by avoiding aquifers of

high quality. The rules have been revised from their proposed form to clarify that the process of site selection involves optimization to the maximum extent practicable of the following general site qualities:

- remoteness from populated areas;
- hydrogeologic and other environmental conditions conducive to continued immobilization and isolation of containments from usable groundwater sources; and
- limited potential for erosion, disruption, and dispersion by natural forces.

Tradeoffs will inevitably be required in this process. In any event, siting is of paramount importance in developing optimum tailings disposal programs. The problem of tailings disposal cannot be approached with the attitude that inadequate siting features can be compensated for by design. For this reason, the rules state, as originally proposed, that in the selection of disposal sites, primary emphasis shall be given to isolation of tailings or wastes, a matter having long term impacts, as opposed to considerations of short term convenience or benefits, such as minimization of transportation or land acquisition costs.

### *Radon Control and Tailings Cover Requirements*

Many commenters stated that the requirements for radon control should be based upon a fully quantified, incremental cost-benefit evaluation. However, the NRC staff reached a conclusion in the draft GEIS that attempting to establish tailings cover requirements on the basis of a quantified, incremental cost-benefit evaluation is unreasonable and, indeed, may be misleading.

In response to these comments, however, the NRC staff reexamined and expanded its evaluation of the strictly monetized, incremental cost-benefit methodology. Conclusions expressed in the draft statement concerning the impracticability and inappropriateness of attempting to set a radon exhalation limit solely by this method were fully reconfirmed. This is discussed more fully in Section 5.2.2 of the Summary of the final GEIS. Given the long term nature of the mill tailings hazards, and the complexity and uncertainty associated with predicting actual levels of radon emissions and impacts over the long term, it is concluded that the problem of determining tailings containment requirements cannot be reduced to the purely mathematical formulations required for the quantitative cost-benefit optimization methodology. The mathematical process

grossly oversimplifies the problem and, thus, while it appears to offer a "rational approach" to decisionmaking, it can be misleading and quite arbitrary.

One of the obvious problems with this methodology is that arguments can easily be made for virtually opposite positions (little or no control, versus absolute control or radon releases) merely by measuring potential health impacts over short or long time periods. In fact, commenters did this. The monetary worth of averting a health effect ("life loss" or "life shortening" due to cancer) is another highly subjective factor which can vary widely and, thus, make more uncertain the level of control which should be required. While arbitrary decisions might be made concerning these factors, there is no practicable way to correlate long term containment performance uniquely with costs.

The NRC staff established the proposed final tailings radon flux limit based upon an evaluation of a wide range of public health and cost factors, and the variability of site specific conditions. More specifically, these factors included evaluation of alternative radon release limits in terms of: costs for applying a final tailings cover under a full range of conditions that will occur with varying ore grades, impoundment sizes and shapes, cover material types and so on; impacts on maximum exposed individuals as they compare with existing radiation protection standards; total population exposures as they compare with population exposures from natural and technologically enhanced radon releases, both short and long term; and, radon fluxes that occur from natural soils.

In consideration of these perspectives and the problems with monetized cost-benefit evaluations, it was determined that the most reasonable residual radon emission limit would be one that would assure that tailings disposal sites are eventually returned to conditions which are reasonably near those of the surrounding environs. The radon flux limit assures that radon exhalation rates will be within the range of flux rates occurring naturally from nearby soils.

### *Period of Long Term Concern*

Many commenters stated that tailings disposal should be viewed as a problem spanning eventually an infinite period of time, and the total number of potential health effects resulting from radon releases should be viewed in absolute terms. By integrating health effects over such periods of time, the number of calculated health effects is extremely large and, on the basis of this,

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commenters urged that advanced modes of tailings disposal are warranted to provide complete or improved isolation of tailings. On the other hand, some stated that, because of the vast uncertainties involved, and the potential for development of a cure for cancer, a much shorter period such as 100 years is appropriate for evaluating the need and cost-effectiveness of controls. On this basis, much less stringent controls are urged.

The NRC has evaluated this problem and developed regulations considering the inescapable fact that the tailings will, in fact, remain hazardous for extremely long periods of time, hundreds of thousands of years. Viewing this matter as one of only short term significance because of the uncertainties involved with the long term or on the speculation that there may be a cure for cancer is unrealistic and not responsible. On the other hand, attempting to provide absolute assurances that the tailings, which are very large volume, low-specific activity wastes, will remain completely isolated for infinite time frames is impracticable and inappropriate when the potential impacts of other naturally occurring and technologically enhanced, persistent radon sources are considered.

The general conclusions about the various tailings disposal modes are summarized in Summary Section 5.2.1 and Section 12.3.3 of the final GEIS. The tailings siting and design features specified in the regulations are intended to provide a degree of isolation which is consistent with the reality that the tailings present long term hazards. These measures are those identified to be needed to account for potential failure mechanisms which can occur in the very long term. The features which are being incorporated into tailings disposal programs under the regulations are similar to those of landforms which have been known to be stable for extremely long periods of time. For example, elimination of embankment slopes by below grade burial or use of rock covering on very gentle slopes will make sites stable landforms. The latter will duplicate conditions such as those existing in alluvial deposits in Death Valley which have been stable for 20,000 years because of the "armoring" provided them by coarse rock and gravel "desert pavements." Minimum requirements on cover thickness have been specified with the knowledge that covers performance can be degraded in numerous ways.

In general, the condition of tailings disposal sites should be virtually the same as those in surrounding environs

and should remain so without active care and maintenance. Advanced tailings disposal modes such as fixation or nitric acid leaching may offer potentially improved isolation, but the improvement over what are considered adequate programs is uncertain while the costs are excessively high and other, new problems are encountered with such technologies.

### *Groundwater Protection*

A number of separate issues were raised concerning the matter of tailings impoundment seepage and groundwater protection.

Some commenters stated that in addition to requiring control of seepage, the regulations should clearly specify that groundwater uses must be protected as there will inevitably be some seepage occurring. The NRC's intent in the proposed regulations was to protect current and potential groundwater uses and the final regulations have been drafted to explicitly state this. That is, where an aquifer below a site is initially of drinking water quality, it shall remain so during and after operations.

Others questioned whether continued seepage from impoundment would not be a problem over the very long term. Because uranium milling in the United States is conducted in semi-arid regions and evaporation rates are frequently far in excess of rainfall rates, it is not expected that seepage will be long-term problem. There is concern about providing good seepage control primarily during the operational period when hundreds of tons of waste solutions are generated daily at an average mill. After the impoundments dry, there will be virtually no driving force for seepage. There is good reason to expect that there is, in general, little recharge of aquifers in interfluvial zones in the semi-arid milling regions, if there is any at all. It is for this reason that the NRC has accepted use of synthetic liners, the likely long term stability of which is questionable at best. Many commenters stated that the matter of groundwater protection should only be presented as a broad performance objective, and that specific methods of control should not be identified in the regulations. The concern is that the regulations will be too restrictive. In general, the NRC has identified seepage control as the most effective and positive way of protecting groundwater: methods of seepage control are identified in the regulation, but flexibility is provided to select the most appropriate ones in a case-by-case basis. (See response to the comment on the form of regulations above.)

Some commenters noted that spread of seepage contamination can occur rapidly by fractures, buried channels and other zones of high hydraulic conductivity, and stated that the GEIS and regulations should recognize this. Experience has indeed shown this concern to be valid. This has been a matter which routinely receives scrutiny by the NRC in licensing reviews and uncertainty about the existence of such discontinuous features at a site are in great measure, the reason for the NRC's conclusion that seepage prevention is the most appropriate approach to take in groundwater protection. Furthermore, the regulation has been revised to specify more clearly what site information is needed to provide an adequate understanding of hydrologic and geologic conditions which will control seepage and contaminant transport.

Finally, some stated that any area which overlies an aquifer of potential use must be avoided. As discussed above in discussions of the issue of siting, the NRC has revised the regulations to clearly indicate that one of the few most important matters which determine what is an acceptable site is the matter of groundwater protection (see the response to the siting issue above). However, a universal prohibition on siting near aquifers is inappropriate given constraints imposed in meeting other major objectives and given the seepage control measures which can be taken to effectively assure groundwater use is preserved.

### *Cost Estimates*

Several commenters considered the cost estimates of the alternative tailings management programs presented in the draft generic environmental impact statement to be underestimated. In estimating costs in the draft, the NRC considered cost information submitted by the industry in connection with mill licensing cases, obtained quotes from vendors and suppliers, and gathered information from current literature on earthmoving and construction costs. Alternatives were clearly defined as combinations of separate unit operations, the cost of each being stated as a range. Single unit costs were selected from within the range to arrive at total costs. These total costs were consistent with those reported by the industry in actual NRC licensing cases. Where costs were particularly sensitive to assumptions made in defining alternatives, the effects of variations in assumptions on costs were clearly stated.

The NRC has reevaluated costs in the final GEIS. In doing so, the NRC

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consulted other sources in addition to those consulted in preparing the draft GEIS. In general, the NRC found that costs increased by an amount attributable to inflation since the cost estimates were made for the draft GEIS document in 1978.

### *Environmental Impacts of Obtaining Reclamation Cover Material*

Several commenters noted that considerable amounts of cover material would be required to perform final reclamation, that in some cases such material would have to be strip-mined in otherwise undisturbed areas (which would yield significant environmental impacts), and that such impacts were not addressed in the draft statement. It was further stated that this is particularly of concern at existing sites using above-grade disposal and that in some areas the depth of soil available for excavation is very limited. Under such conditions it would be necessary to excavate cover material from very large areas to obtain sufficient quantities of earth to provide reclamation in accordance with tailings cover requirements.

This final GEIS includes an assessment of the potential environmental impacts of obtaining cover material (see Section 9.3.8.4). The assessment includes analysis of what is considered by the NRC to be a potential worst-case situation wherein: (1) cover material must be obtained by strip-mining otherwise undisturbed terrain; (2) cover material must be hauled to the site from a distance of 10 miles (16 km); and (3) the average depth of soil available for excavation in the borrow area is only about 1 meter (not including about 0.5 m of topsoil which must be stripped, stored, and reapplied to revegetate the borrow area). These conditions are considered to be very conservative assumptions. Overburden or mine waste produced during local mining operations may well be available, and if so, would be suitable material provided only that it did not contain excessive radioactivity. To the extent that overburden or mine waste could be used, requirements for undisturbed soil materials would be reduced. Also, the NRC believes that adequate cover materials can be found within distances much less than 10 miles (there are over 300 sq. miles of area within a radius of 10 miles from any point), if not on the mill site itself. Furthermore, the depth of soil which may be excavated and removed will likely be much greater than 1 meter. Even in the rugged and rocky terrain of the Grants, New Mexico area

excavation depths of 15 m (60 ft.) or more are feasible.

With respect to environmental impacts, even under the very conservative assumptions described above, environmental impacts are limited; they are, at worst, comparable to those arising from mill construction with respect to air quality, land use, biota, water resources, and on the community. Given that reclamation of the borrow area will include revegetation to a natural condition, all impacts would be temporary except for the permanent alteration of topography and the irretrievable commitment of fuel burned by the trucks used to haul the cover material to the tailings disposal site. The NRC considers such impacts as small and insignificant in comparison to the benefits obtained by assuring long term physical isolation of the buried tailings and reduced residual radon emissions.

### *Financial Surety*

Several commenters argued that self-insurance or third-party insurance should be considered as a surety mechanism. The basis for ruling out self-insurance is simply that such an arrangement would provide no additional assurance, other than that which would already exist through license requirements. Other commenters indicated that the required amount of surety coverage should be based on the licensee's costs for decommissioning and reclamation as opposed to contractor costs which include increased overhead and profit. With regard to the required amount of surety coverage, it seems obvious that the purpose of the surety mechanism is to protect the public from the possibility of a licensee's inability to perform the required decommissioning and reclamation and thus the only time when a surety would be collected would be in the event of default. A licensee's cost estimate would certainly be less than costs which an independent contractor would charge; therefore, inadequate protection would result if estimates based on licensee costs were permitted.

Several other commenters questioned the availability of surety bonds under the conditions described as necessary for satisfaction of the surety requirement. Although the NRC's investigation of the situation does indicate that there seems to be resistance on the part of some bonding companies to becoming involved in issuing bonds to companies subject to government regulation, the resistance appears to be the result of a misunderstanding of the requirements of

the regulation. The surety mechanism covers specific decommissioning and reclamation activities committed to by operator in the license and is not a guarantee to satisfy an indefinite set of requirements which may be established 15 or 20 years in the future. Furthermore, the evidence indicates that the surety market is competitive since some bonds have been obtained by uranium recovery operators even recently. In addition, flexibility exists in terms of acceptable types of mechanisms to satisfy the surety requirement.

Another comment which was raised pertaining to the decommissioning and reclamation surety concerned the required term of the surety. As stated in the draft GEIS and the proposed rules, the term of the surety must be open-ended in order to provide the requisite high level of assurance. The NRC considered that unless the surety remained in force until decommissioning and reclamation activities covered by the arrangement were completed, there would be nothing to prevent the surety company from cancelling the arrangement if and when the financial stability of the licensee became questionable or at the end of milling operations when the assurance is most needed. Obviously, this would provide the public with totally inadequate protection. However, through further consideration and investigation, the NRC has learned that other types of arrangements may provide the same high level of assurance as an open-ended arrangement does. Therefore, provision has been made in the decommissioning and reclamation surety criterion to allow flexibility concerning the term of the arrangement, providing the same high level of assurance exists.

### *Long Term Funding*

A number of comments were received concerning the requirement that an amount be paid to cover the costs of long term site surveillance. Some commenters indicated that the amount, the equivalent of \$250,000 in 1978 dollars, was too high, others stated that it was too low, and some indicated that they considered it should correlate with the size of the disposal site. The basis for the long term fund, as established in the draft GEIS, is that something on the order of an annual site inspection to confirm the integrity of the site will be all that is necessary. However, the requirement is designed so that sufficient flexibility exists to increase the required charge, if appropriate, at certain sites if it is determined that the necessary level of surveillance and site control are significantly greater than



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government agency, because it is probably the only institution which would have sufficient resources, would be available to support proper action. However, transfer of certain subsurface rights may be of less importance in providing the necessary control.

Thus, although Criterion 11 requires applicants/operators to make a serious effort to acquire all interests in the land, sufficient flexibility is maintained to permit the Commission to determine that surface ownership, by itself, of a site with characteristics conducive to long term stability may be sufficient. In addition, the Commission would require appropriate notice in the public land records that the land is being used for tailings disposal and thus, would be subject to an NRC license prohibiting the disturbance of the tailings in the exercise of any other interest in the real property.

In addition, Criterion 11 makes essentially no distinction between land ownership requirements for licenses issued before or after November 8, 1981. As discussed in Sections 12.3.11 and 13.4 of the final GEIS, the NRC has concluded that surface ownership is necessary to assure ongoing surveillance, except possibly in the case of deep mine disposal. Thus, although UMTRCA directs the Commission to specifically consider the status of land ownership at existing facilities, the NRC does not consider it reasonable to expect that any licensee or site owner would be willing to accept the onerous obligation associated with a perpetual NRC license, which would be required if land ownership is not transferred. Given these circumstances, the NRC does not expect there will be a situation where waivers to surface land ownership transfer requirements will be appropriate.

### *Agreement State Regulation*

A number of commenters indicated that the draft GEIS failed to assess the Agreement States' programs. Others inquired as to how the new requirements would be implemented in Agreement States. The amendments to the Mill Tailings Act in 1979 clarify when the new requirements become effective in Agreement States. Generally, the States are required to implement the new requirements immediately, to the extent practicable, and to establish standards by November of 1981 which are equivalent to, or more stringent than, the minimum national standards established by the Commission. Also, the UMTRCA requires Agreement States to complete independent, documented environmental assessments in

assumed in the GEIS. For example, this might occur if fencing is determined to be necessary. However, the NRC considers that as long as some ongoing monitoring is appropriate, the nominal charge established by this requirement could hardly be reduced.

Other commenters indicated that they considered the long term fund charge should be designed like an insurance fund and cover any damage which may result from a catastrophic event. As discussed in Section 14.3 of the final GEIS, the staff considered an insurance fund to cover costs associated with unforeseen events such as catastrophic occurrences, but rejected this option on the basis that the likelihood of such an occurrence would be small and design against it would be impractical beyond that which is already required in terms of siting and design. As mentioned above, where there is significant uncertainty about long term performance, which might occur at an existing site where options for tailings disposal are limited, more than the minimum fee can be charged.

### *Government Land Ownership*

A number of commenters inquired about how the land ownership requirements would be implemented, particularly with regard to existing facilities where UMTRCA explicitly allows for NRC discretion. Transfer of an unencumbered fee estate may be difficult to achieve since land ownership can be a complex matter, particularly in western states where it is not uncommon for surface rights, mineral rights (including oil and gas), and water rights to be conveyed as separate interests. The NRC is concerned that if complete and total transfer is required, land ownership considerations (i.e., the difficulty in assembling title to all interests) may significantly impact the selection of sites. If the ability to obtain title to land became a driving force in the site selection process, this would be wholly inconsistent with the fundamental conclusion of the GEIS, i.e., that physical isolation as opposed to institutional arrangements must be the primary means of long term control.

In addition to concluding that physical site characteristics conducive to long term stability are of overriding importance, the NRC considers that in most cases Government control of the surface rights is necessary (1) to control land uses at the disposal site which could lead to disruption of the tailings, and (2) in general, to assure ongoing surveillance is performed. Government control is also considered prudent so that in the unlikely event that remedial action at a disposal site is required, a

connection with each licensing case. The need for such documents and public review is a major conclusion of the final GEIS. The Mill Tailings Act also requires the Commission to evaluate the equivalency of the Agreement State program by November 1981. A more comprehensive set of criteria to be used in review of Agreement State programs is being developed by the NRC and will be made publicly available. It is considered that a detailed evaluation of the Agreement State program is not appropriate in the GEIS; however, the general role of Agreement States and their relationship with NRC is discussed.

### *Exemption From Licensing Small Quantities of Byproduct Material*

Some commenters suggested that small quantities of byproduct material connected with research and development should be exempted from licensing requirements. The NRC agrees that this would be desirable but is not, at this time, proposing rules to provide for either an exemption or general license (i.e., a license effective without the filing of applications with the Commission or the issuance of licensing documents to particular persons) covering small quantities of byproduct material. In order to exempt materials from licensing requirements or issue general licenses, the Commission must determine that the quantities of materials involved will not be harmful to the health and safety of the public and to the environment. It is the NRC's understanding that the quantities of tailings generally involved in research and development activities may be as large as a few tons. The NRC notes that a quantity such as this may, among other things, result in a buildup of unacceptable radon concentrations in improperly ventilated structures. Thus, the NRC believes that additional evaluations are necessary before it can be determined what quantities of tailings can be exempted from licensing requirements or be covered under a general license. The NRC is therefore further considering this issue and plans to publish its conclusions on this subject at a later date in order not to delay issuance of the rules identified below.

In the meantime, it will be necessary for individuals conducting research and development activities using byproduct material, as defined in 10 CFR Part 40, to obtain a specific NRC license. The NRC does not believe this should be a significant administrative or costly burden on applicants since it is anticipated minimal information will be required in license applications (i.e., provisions for (1) providing proper ventilation; (2) conducting necessary



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radiation safety surveys; and (3) disposal of materials to properly licensed persons). Furthermore, there are presently no fees in 10 CFR Part 170 applicable to the use of these quantities of byproduct material for research and development activities. The NRC does not plan to require fees for these licenses, at least until formal rules to 10 CFR Part 170 have been adopted. The NRC requests written comments on this matter and any additional information on specific quantities and uses to be considered for exemption or covered by a general license. The technical basis for such comments is also requested.

### IV. Significant Features of Final Rules

The rules promulgated in this notice are derived from the conclusions reached in the final GEIS on uranium milling and the requirements established by the UMTRCA. The major conclusions reached in the final GEIS relative to needed rule changes, stated here in broad terms, are:

1. In selecting among alternative tailings disposal sites or judging the adequacy of existing sites, consideration should be given to specific site characteristics which will assure meeting the broad objective of isolating tailings and associated contaminants from humans and the environment without ongoing active maintenance for thousands of years.

2. The "prime option" for tailings disposal is placement below grade.

3. Where full below grade burial is not practicable and tailings must be located above grade, tailings should be placed as much below grade as is reasonably achievable.

4. Methods, such as liners or dewatering, should be employed to reduce seepage of toxic materials into groundwater to the maximum extent reasonably achievable. Any seepage which might occur must not result in the deterioration of the quality of existing affected groundwater.

5. Sufficient earth cover, but not less than 3 meters, should be placed over tailings to reduce radon exhalation from buried tailings to a calculated value of not more than  $2\text{pCi}/\text{m}^2\text{-sec}$  above natural background levels. A full self-sustaining vegetative cover should be established on the earth cover or a rock cover employed to reduce to negligible amounts the potential for significant wind and water erosion of the earth cover. In arid and semi-arid regions where it is unlikely vegetation will be full and self-sustaining, rock cover stabilization is mandatory.

6. Milling operations should be conducted so that all airborne effluent releases are reduced to as low as is

reasonably achievable. To accomplish this objective, staged reclamation of tailings systems should be considered to control radon emissions and the blowing of dusts from tailings and frequent determinations of the performance of emission control devices should be made to ensure that these devices are operating at anticipated efficiencies.

7. Financial surety arrangements should be established to ensure that sufficient funds are available to cover the costs of decontamination and decommissioning of the mill, mill site, and environs and for the reclamation of tailings areas.

8. Sites on which tailings are finally disposed should be controlled through ownership and custody by a government agency unless, in special cases as might occur in deep mine disposal, this is determined unnecessary.

9. Funds should be provided by each mill operator to cover the costs of long term site surveillance and any probable long term monitoring and maintenance requirements.

10. Construction of a uranium extraction facility or tailings disposal area should not commence until the NRC has completed its final environmental impact assessment required by the National Environmental Policy Act (NEPA), or an Agreement State has completed its written environmental analysis as required by UMTRCA.

The UMTRCA, among other things, specifies:

1. A revised definition of "byproduct material" to include tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content;

2. Ownership and custody requirements for byproduct material;

3. Provisions for requiring bonds, sureties, or other financial arrangements covering the decontamination, decommissioning, and reclamation of sites, structures, and equipment used in conjunction with byproduct material; and

4. Provisions governing Agreement State authority under Section 274 of the Atomic Energy Act.

The significant features of the new rules are discussed below. Several changes, as indicated in the above discussion and the Summary and Appendix A of the final GEIS, have been made in these rules to reflect public comments, to better clarify specific requirements, and, where practical, to provide flexibility.

1. Section 40.26 of Part 40 is amended to add a new paragraph (d) which specifies that the general license

covering tailings at active mills expires within nine months from the effective date of this amendment unless an affected licensee has submitted an application for license renewal or amendment which includes a detailed program from meeting the technical and financial criteria contained in the new Appendix A to Part 40. The Commission considers this amendment necessary to ensure that all existing mill operators who have not already done so develop acceptable programs relating to the long term disposition of tailings at active mills in a timely manner.

2. Section 40.31 of Part 40 is amended by adding a new paragraph (g) to require applicants for mill licenses to propose written specifications relating to the operation of mills and disposition of tailings or wastes to achieve requirements and objectives set forth in a new Appendix A to 10 CFR 40. As provided by paragraph (g), applicants for mill licenses must clearly demonstrate how the requirements and objectives set forth in Appendix A have been addressed; failure to clearly demonstrate how the requirements and objectives in Appendix A have been addressed will be grounds for refusing to accept an application for a license. These requirements and objectives are discussed in the following item #3.

3. A new Appendix A entitled, "Criteria Relating to the Operation of Mills and Disposition of Tailings or Wastes Produced by the Extraction or Concentration of Source Material From Ores Processed Primarily for their Source Material Content," is added to 10 CFR 40. As indicated in the August 24 notice, this appendix consists of four major categories: technical criteria; financial criteria; site and byproduct material ownership criteria; and long term site surveillance criteria. These criteria are, for the most part, essentially the same as those contained in the August 24 notice except that many of the terms and provisions included in the proposed criteria have been more explicitly defined and/or clarified as recommended in public comments. Also, flexibility is provided in many cases as suggested in public comments to allow achieving an optimum tailings disposal program on a site specific basis.

The detailed bases for the criteria in the new Appendix A are contained in the final GEIS. As noted above in preparing the final GEIS, the NRC has completely rechecked cost estimates for meeting the major criteria in Appendix A. Estimated costs were derived from information on costs submitted by applicants for licenses, experienced engineering consultants under NRC

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contracts, and other information on costs available to the NRC. The Commission believes that under these criteria tailings and wastes can be disposed of at reasonable costs in a manner that the purposes and mandates of the UMTRCA will be achieved and fulfilled, respectively. Thus, the need for ongoing active care and maintenance programs to redress degradation of the tailings isolation by natural weathering and erosion forces can be essentially eliminated. In that the technical criteria relating to the siting of mills and tailings disposal areas preclude location of tailings or milling operations in an area that could be disrupted by natural events such as flooding, these criteria will ensure that the requirements of Executive Order 11988 of May 23, 1977, concerning flood plain management are met. Therefore, as well as assuring tailings isolation, flood plains will be protected.

The new Appendix A requires all mill operators to develop and submit to the NRC definitive programs meeting the technical and financial criteria in the Appendix. These programs must be submitted with license renewals or within nine months from the effective date of the appendix, whichever occurs first.

4. Paragraphs (b) of § 40.14 and (e) of § 40.32 of 10 CFR 40 are amended to require the Director of the NRC's Office of Nuclear Material Safety and Safeguards or his designee to make a positive finding on an applicant's proposed plans as meeting the requirements and objectives in Appendix A prior to commencement of construction of a mill which produces byproduct material. This finding would be that made in the final environmental impact statement (or other environmental assessment) prepared pursuant to 10 CFR Part 51. These amendments delete paragraph (b) of § 40.14 and preclude exemptions from the requirements of §§ 40.31(f) and 40.32(e) of Part 40. They also amend paragraph (e) of § 40.32 to require the denial of applications for licenses where construction is started before the appropriate environmental appraisals are completed and documented. Construction activities are likely to result in significant and long lasting environmental impacts, the propriety of which cannot be ascertained until these environmental appraisals are completed and documented. The Commission also notes in this regard that milling results in the production of large quantities of byproduct material as tailings each year. When construction of a mill begins, including its tailings disposal area,

irrevocable commitments are made regarding tailings disposal. Given that each mill tailings pile constitutes a low-level waste burial site containing long lived radioactive materials, the Commission believes that prudence requires that specific methods of tailings disposal, mill decontamination, site reclamation, surety arrangements, and arrangements to allow for transfer of site and tailings ownership be worked out and approved before a license is granted.

The Commission further notes that similar irrevocable and/or irretrievable environmental impact and resource commitments are involved in the commencement of construction of plants and facilities in which source materials are possessed and used for the production of uranium hexafluoride and commercial waste disposal by land burial. Accordingly, the requirements of the revised paragraphs (b) of § 40.14 and (e) of § 40.32 would apply to these plants and facilities.

5. The amendments to 10 CFR 30 and 70 also relate to commencement of construction of other types of plants and facilities in which byproduct and special nuclear materials are used and possessed. The Commission believes commencement of construction of these plants and facilities may also result in irreversible and irretrievable commitments of environmental impacts and resources. Therefore, the Commission believes that it is also desirable and necessary that a final environmental impact statement or assessment be completed and documented before authorizing commencement of construction. Thus, 10 CFR 30.11(b), 10 CFR 30.33(a)(5), 10 CFR 70.14(b) and 10 CFR 70.23(a)(7) are amended to conform to the foregoing amendments to 10 CFR 40.

6. A new § 150.15a is added to 10 CFR Part 150 to enumerate certain authorities reserved to the Commission under UMTRCA. Paragraph (a) is drawn directly from sections 204(f) and 202(a) of UMTRCA. Paragraph (b) is extracted from § 83 of the Atomic Energy Act of 1954, as added by § 202(a) of UMTRCA. The language of UMTRCA and its legislative history indicate that the NRC is to make the determinations under, and establish standards pursuant to, § 83, which minimum Federal standards and determinations must, under § 204(e) of the UMTRCA, be met by the Agreement States. New §§ 150.31 and 150.32 outline requirements in the UMTRCA for Agreement State regulation of tailings or activities that produce such tailings or wastes. These new sections are taken directly from

§ 274o of the Atomic Energy Act, as added by § 204(c) of the UMTRCA.

Under the provisions of the new § 150.31, an Agreement State must, after November 8, 1981, require compliance with standards for the protection of the public health, safety, and the environment from hazards associated with byproduct material which are equivalent, to the extent practicable, or more stringent than, standards in the new Appendix A of 10 CFR Part 40 discussed in Item 3 above. Before November 8, 1981, an Agreement State must require compliance with Appendix A of 10 CFR Part 40 to the maximum extent practicable. As discussed above, the provisions of the new Appendix A will require all mill operators to develop and submit detailed programs (which include appropriate supporting data, analyses, and alternatives) meeting the technical and financial criteria in the Appendix A in connection with license renewals or within nine months, whichever occurs first. The Commission believes that it is practicable for Agreement State licensees to develop and submit similar detailed programs to their respective licensing authorities in view of the length of time active milling operators have known of the basic components of these criteria and the nearly one year period before submittals are required. Therefore, the Commission expects Agreement States to immediately implement this requirement under the provisions of the UMTRCA which require Agreement States to implement equivalent standards "to the maximum extent practicable" during the interim period until November 8, 1981. The Commission notes in this regard that approval of a final acceptable plan (which may include various remedial alternatives for the management of existing tailings systems as well as alternatives for the management of tailings to be generated in the future) may take a long time following submittal of initial plans by licensees given the difficulty of the issues typically involved at existing sites. Thus, it is necessary for present mill operators to begin now to develop programs for meeting the standards in the new Appendix A to 10 CFR Part 40 rather than to delay until November 8, 1981, to develop plans and/or alternative programs for meeting the standards. Furthermore, the Commission considers it practicable now, even before final plans may have been worked out and approved, to immediately implement steps to reduce airborne effluent releases from both plant operations and tailings systems and seepage from tailings systems to levels which are as low as are

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reasonably achievable as specified in the standards of the new appendix. This is also required in order to meet the EPA standards in 40 CFR 190 which must be enforced by the Commission and Agreement States by December, 1980. Therefore, it is essential that licensing action be taken now to ensure interim tailings management programs which deal with presently occurring impacts such as blowing tailings and uncontrolled seepage are worked out on an immediate basis even before complete disposal programs can be finalized.

### V. Future Actions

The UMTRCA establishes certain responsibilities and authorities whereby the Environmental Protection Agency (EPA) must develop standards of general application for the protection of the public health, safety, and the environment from radiological and nonradiological hazards associated with the processing and with the possession, transfer, and disposal of byproduct materials. These generally applicable standards for nonradiological hazards must provide for the protection of human health and the environment consistent with the standards required under subtitle C of the Solid Waste Disposal Act, as amended. The Commission and any State permitted to exercise authority under § 274b.(2) of the Atomic Energy Act must apply these standards of general application in licensing actions involving byproduct material.

The EPA has not, as yet, proposed the standards described above. It is the Commission's understanding, based on NRC and EPA staff discussions, that these standards will probably not be proposed before 1981. Upon finalization of the EPA standards, it is likely that minor changes will be required in the Commission's regulations. However, to delay issuance of the rules set forth below until the final EPA standards have been issued will, in all probability, preclude sufficient time for applicable Agreement States to adopt standards which are equivalent to or more stringent than those of the Commission's by November 8, 1981, in order to meet the requirements in the UMTRCA.

### VI. Regulatory Changes

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, the Uranium Mill Tailings Radiation Control Act of 1978, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendments to Title 10, Code of Federal Regulations, Parts 30, 40, 70, and 150 are published as a document subject to codification.





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requirement of Pub. L. 96-106, there is a need to revoke certain of the immediately effective rules (viz., §§ 40.2a, 40.26(b)(2), and 150.15(a)(7)) which were published in the August 24 Federal Register notice (44 FR 50012).

It should be noted, however, that the effective regulations granting a general license for possession of such byproduct material to NRC licensees in non-Agreement States are not revoked. These regulations remain necessary to prevent licensees from being in technical violation of UMTRCA's requirements concerning byproduct material licenses from the NRC.

The Commission finds that because the §§ 40.2a, 40.26(b)(2), and 150.15(a)(7) are in conflict with the requirements of Pub. L. 96-106, they must be revoked immediately. Because these regulations no longer have any basis in law, good cause exists pursuant to 5 U.S.C. 553 to waive the 30-day comment period, as impracticable and contrary to the public interest, and make the following amendments immediately effective.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, the Uranium Mill Tailings Radiation Control Act of 1978, as amended by the Surface Transportation Assistance Act of 1978 (Pub. L. 96-106), and sections 552 and 553 of Title 5 of the United States Code, the following amendments to Title 10, Parts 40 and 150, Code of Federal Regulations, are published as a document subject to codification.

45FR14199  
Published 3/5/80  
Effective 3/5/80

*Minor and Clarifying Amendments*

See Part 1 Statements of Consideration

45 FR 18905  
Published 3/24/80  
Effective 3/24/80

*Deletion of Reference to Panama Canal Zone; Minor Amendments*

See Part 4 Statements of Consideration.

45 FR 50705  
Published 7/31/80  
Effective 7/31/80

*Safeguards on Nuclear Material-Implementation of US/IAEA Agreement*

See Part 75 Statements of Consideration.

45 FR 55419  
Published 8/20/80  
Effective 9/19/80

### 10 CFR Part 40

#### Deletion of Source Material Medicinals From the General License for Small Quantities of Source Material

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is amending its licensing regulations by deleting the provision for general license authorization of the use of source material<sup>1</sup> in humans by physicians, pharmacists, and other persons receiving source material in the form of medicinals or drugs. Thorotrast, containing alpha-emitting thorium-232 dioxide, was the only source material medicinal used in humans. However, as the radiobiological hazards of alpha-emitting radionuclides became known, the product fell into disuse and production of Thorotrast was discontinued in 1965. This action will require authorization by means of an NRC specific license for internal or external administration of source material, or the radiation therefrom, to human beings.

**EFFECTIVE DATE:** September 19, 1980.

**FOR FURTHER INFORMATION CONTACT:** Deborah A. Bozik, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Telephone 301-443-5860).

**SUPPLEMENTARY INFORMATION:** Thorotrast, authorized for use by the general license in § 40.22, "Small quantities of source material," of 10 CFR Part 40, and used as an X-ray contrast agent, has been the only source material utilized as a medicinal; no other thorium or uranium compounds have been used as source material medicinals. Thorotrast is the colloidal dioxide of thorium-232 which is an alpha-emitting radionuclide. As the radiobiological hazards of these radionuclides became apparent, the carcinogenic potential of Thorotrast became evident, and, in 1965, the production of Thorotrast was stopped. Improvements in X-ray machines and imaging techniques have resulted in Thorotrast being replaced with nonradioactive contrast agents. The Food and Drug Administration (FDA) terminated the approved New Drug Application (NDA) for Thorotrast on June 13, 1977.

NRC and FDA both strive for consistency with respect to each other's

<sup>1</sup> Source material, as defined in 10 CFR 40.4(h) means, among other things, uranium or thorium, or any combination thereof, in any physical or chemical form.

regulations. On March 6, 1980, NRC published a proposed rule (45 FR 14589) to amend the general license in § 40.22 by deleting the authorization for the

following persons to use and transfer small quantities of source material:

- (1) Pharmacists using source material solely for compounding medicinals;
- (2) Physicians using source material for medicinal purposes; and
- (3) Persons receiving possession of source material from pharmacists and physicians in the form of medicinals or drugs.

Under the proposed rule, the following groups would still retain their authorization under this general license to use small quantities of source material for research, development, educational, commercial or operational purposes:

- (1) Commercial and industrial firms;
- (2) Research, educational and medical institutions; and
- (3) Federal, State and local government agencies.

A new paragraph would be added under the proposed rule to the general license in § 40.22 of 10 CFR Part 40 which would prohibit licensees from administering source material, or the radiation therefrom, either internally or externally, to human beings, except where authorized by an NRC specific license.

The public was invited to submit written comments on the proposed rule by May 6, 1980. Eight comments were received, and all supported the proposed amendment. One commenter qualified his support by inquiring if the people whose authorization is being withdrawn by this amendment have been making other use of source material. To the best of the Commission's knowledge, no one in the affected groups has been using source material since Thorotrast production was discontinued in 1965. Therefore, the Commission is adopting the final rule in the form identical to the proposed amendment.

Under the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendment to Title 10, Chapter I, Code of Federal Regulations, Part 40 is published as a document subject to codification.

➤ 45 FR 65521  
Published 10/3/80  
Effective 11/17/80

*Uranium Mill Licensing Requirements*

See Part 30 Statements of Consideration



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reasons exist for reactor operation. Finally, pursuant to 10 CFR 2.202(f), the Commission may, in appropriate circumstances, make the order immediately effective, which could result in immediate plant shutdown subject to a later hearing.

### IX. Funding

In view of the requirements in these rule changes regarding the actions to be taken in the event State and local government planning and preparedness are or become inadequate, a utility may have an incentive, based on its own self interest as well as its responsibility to provide power, to assist in providing manpower, items of equipment, or other resources that the State and local governments may need but are themselves unable to provide. The Commission believes that in view of the President's Statement of December 7, 1979, giving FEMA the lead role in offsite planning and preparedness, the question of whether the NRC should or could require a utility to contribute to the expenses incurred by State and local governments in upgrading and maintaining their emergency planning and preparedness (and if it is to be required, the mechanics for doing so) is beyond the scope of the present rule change. It should be noted, however, that any direct funding of State or local governments solely for emergency preparedness purposes by the Federal government would come through FEMA.

### X. Exercises

On an annual basis, all commercial nuclear power facilities will be required by NRC to exercise their plans; these exercises should involve exercising the appropriate local government plans in support of these facilities. The State may choose to limit its participation in exercises at facilities other than the facility (site) chosen for the annual exercise(s) of the State plan.

Each State and appropriate local government shall annually conduct an exercise jointly with a commercial nuclear power facility. However, States with more than one facility (site) shall schedule exercises such that each individual facility (site) is exercised in conjunction with the State and appropriate local government plans not less than once every 3 years for sites with the plume exposure pathway EPZ partially or wholly within the State, and not less than once every 5 years for sites with the ingestion exposure pathway EPZ partially or wholly within the State. The State shall choose, on a rotational basis, the site(s) at which the required annual exercise(s) is to be conducted; priority shall be given to new facilities

seeking an operating license from NRC that have not had an exercise involving the State plan at that facility site.

The Commission has determined under the criteria in 10 CFR Part 51 that an environmental impact statement for the amendments to 10 CFR Part 50 and Appendix E thereof is not required. This determination is based on "Environmental Assessment for Final Changes to 10 CFR Part 50 and Appendix E of 10 CFR Part 50, Emergency Planning Requirements for Nuclear Power Plants" (NUREG-0685, June 1980). Comments on the "Draft Negative Declaration; Finding of No Significant Impact" (45 FR 3913, January 21, 1980) were considered in the preparation of NUREG-0685.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that the following amendments to Title 10, Chapter I, Code of Federal Regulations, Parts 50 and 70, are published as a document subject to codification.

➤ 45 FR 62789  
Published 9/22/80  
Effective 10/22/80

### 10 CFR Part 50

#### Domestic Licensing of Production and Utilization Facilities; Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is amending the portion of one of its regulations that provides requirements for leak testing of containment building air locks in order to permit greater flexibility for such testing in the case of frequent use of the air locks.

**EFFECTIVE DATE:** October 22, 1980.

**FOR FURTHER INFORMATION CONTACT:** E. G. Arndt, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, DC 20555 (301-443-5997).

**SUPPLEMENTARY INFORMATION:** On January, 11, 1980, the Nuclear Regulatory Commission published in the *Federal Register* (45 FR 2330) a proposed amendment to its regulation 10 CFR Part 50, "Licensing of Production and Utilization Facilities" which would amend Appendix J, "Primary Reactor

Containment Leakage Testing for Water-Cooled Reactors," with regard to Type B testing requirements. Interested persons were invited to submit written comments by February 25, 1980. Three sets of comments were received. After consideration of the comments received and other factors involved, the Commission has adopted the amendment to Appendix J, 10 CFR Part 50, as published for public comment.

Copies of the comments, an abstract of comments containing staff responses, and the value/impact analysis supporting the rule, are available for public inspection at the Commission's Public Document Room at 1717 H Street, NW., Washington, DC. Single copies

may be obtained on request from the Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: E. G. Arndt.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553, title 5 of the United States Code, the following amendment to 10 CFR Part 50 is published as a document subject to codification.





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**Register.** Based on the public comments and other considerations, the Commission has adopted the proposed amendments, with modifications as set forth below.

The effective physical protection amendments are designed to have overall equivalency to the recommendations of INFCIRC/225 Rev. 1, but there are differences in the detailed requirements. INFCIRC/225 Rev. 1 recommendations are designed to minimize the possibilities of theft or sabotage of SNM of moderate or low strategic significance. The effective amendments have been primarily designed to require early detection of theft of SNM of moderate or low strategic significance. However, in requiring early detection capabilities, these amendments deter the possibilities of theft or diversion. In the judgment of the Commission, the degree of protection afforded by the containment, monitoring and detection procedures required by these amendments provide equivalency to the INFCIRC/225 Rev. 1 recommendations for protection of theft or diversion of SNM.

Significant differences from the proposed rule published for comment on May 24, 1978 are: (1) Plutonium-Beryllium (PuBe) sealed sources would be exempted from the physical protection requirements; (2) Plutonium with isotopic concentration exceeding 80 percent in plutonium-238 would be exempted from the physical protection requirements; (3) package and vehicle search requirements at facilities where special nuclear material of moderate strategic significance is used or stored have been changed; (4) The period of time allotted for submittal of a licensee plan to implement these requirements has been changed from 60 days to 120 days after the effective date of the amendment. In addition, editorial and clarifying changes were made and some definitions added to clarify the intent of the regulations.

The following discussion pertains to items (1) through (4) above.

(1) PuBe sealed sources—Commenters stated that the cost of providing the required physical protection for PuBe sealed sources would be prohibitive from the point of view of the limited budgets available at universities where most of the sources are now located. Imposition of the proposed requirements, it was said, would result in the curtailment of the use of PuBe sources at some sites with a significant impact on the educational and research programs at those institutions. In view of the very small quantities of plutonium found in PuBe sealed sources (generally, from 16 to 161 grams) and the fact that

potential adversaries wishing to obtain a 5 kg formula quantity of plutonium would have to commit separate acts of theft at a large number of widely separated sites without being detected, the Commission has decided that the threat to the common defense and security of this country was sufficiently low that physical security measures should not be required for PuBe sealed sources. There is an upper limit of 500 grams of plutonium to which this exemption can be applied because greater than a 500 gram accumulation of plutonium in this form invalidates the basis for this exemption. IAEA guidelines allow for such exceptions in the case of research type facilities.

(2) More than 80 percent Pu-238—The proposed rule has been amended to reflect that plutonium with isotopic concentration exceeding 80 percent in plutonium-238 would be exempted from the physical protection requirements. This change corrects an oversight in the initially proposed amendments in which it was intended that such material would be exempted to be consistent with the definitions of Category II and III material in the IAEA document INFCIRC/225/Rev. 1.

(3) Search requirements—Package and vehicle search requirements at facilities at which special nuclear material of moderate strategic significance is used or stored have been changed. As revised, random searches are only required regarding items leaving controlled access areas, and not of those entering. The primary objective of entry searches is to detect materials which could be useful in sabotage. Since protection against sabotage is not within the scope of the proposed amendments, an entry search requirement is not necessary.

(4) Submission and Implementation of Plans—Several commenters stated that more time would be needed than the sixty days allowed for submission of physical security plans, or amendments to them, following the date the proposed amendments become effective.

The Commission agrees that more time may be required, especially in the case of licensees who have limited managerial and financial resources, and has changed the submission date to be 120 days following the effective date of the amendment. In addition, the licensee is now required to implement the approved security plan within 240 days following the effective date of the amendment or within 30 days after the plan is approved, whichever is later.

Concurrent with the publication of the amendments, the NRC is publishing a guide entitled "Standard Format and Content for the Licensee Physical Security Plan for the Protection of

Special Nuclear Material of Moderate or Low Strategic Significance." The guide is being published for a sixty-day comment period and will be reissued with comments taken into consideration. The amendments to 10 CFR Parts 70, 73 and 150 would become effective at this time (120 days after publication) (November 21, 1979). Licensees would therefore have 240 days after publication of the amendments to submit their plans. The plan would have to be implemented 30 days after approval by the Commission or 360 days after (date of publication in the *Federal Register*) (July 24, 1979).

Another area of comment dealt with employee screening. Some of the licensees interpreted the screening requirement to call for a full field background investigation of all personnel entering the controlled access areas where the material is used or stored. The wording of the rule has been revised to more clearly indicate that the requirement is merely one requiring a screening based on knowledge of persons permitted access rather than a formal security investigation. The guidance package being issued with the rule explains more fully the intent of this requirement.

There was one other area of comment for which no specific changes were made to the amendments but which is of significance. These comments dealt generally with the technical justification for the proposed amendments.

Many of the commenters questioned the technical justification for the proposed amendments on the basis of the lack of detailed information regarding the threat; the additional costs of implementation they perceived to be incommensurate with only marginal improvements in physical protection; and the impacts on the licensees' ongoing educational and research programs. Particular attention was focuses by some commenters on the physical protection requirements for low enriched uranium.

The technical justification for the U.S. adoption of the proposed amendments is contingent on both domestic and international factors, which are closely interrelated. Current NRC physical protection regulations apply primarily to strategic special nuclear material (uranium enriched in the isotope U-235 to 20% or greater, U-233, and plutonium) in quantities of five formula kilograms or greater. There are no specific physical protection requirements for quantities in lesser amounts. Yet, it can be properly argued that a 4.9 formula kilogram quantity of SNM is about as important a quantity as 5.0 kilograms. Multiple thefts of such materials in close to formula quantities could result in the

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accumulation of more than a formula quantity. The proposed detection requirements are considered to provide sufficient protection with minimum added cost so as not to affect educational and research programs. Since the requirements are of a detection nature rather than prevention, characterization of the adversary in the regulations was deemed not to be necessary.

In regard to low enriched uranium (LEU) (enrichments less than 20%), clandestine enrichment to higher levels may go beyond the capability of subnational terrorists, but it does not go beyond the capability of other governments. Unless properly safeguarded, low enriched uranium could be stolen on behalf of foreign governments and enriched to explosive useable levels after it is smuggled out of the U.S.

The Nuclear Non-Proliferation Act of 1978 specifies that NRC shall promulgate regulations which assure that physical security measures are provided to special nuclear materials exported from the United States without specifying whether the materials are low enriched uranium or high enriched uranium. Pursuant to this legislation, the Commission has promulgated 10 CFR Part 110.43 which provides among other things that:

"(b) Commission determinations on the adequacy of physical security programs in recipient countries for Category II and III quantities of material will be based on available relevant information and written assurances from the recipient country or group of countries that physical security measures providing as a minimum protection comparable to that set forth in INFCIRC/225 will be maintained."

While the proposed amendments would provide a needed extension of domestic physical protection to special nuclear materials for which the level of physical protection required was not previously specified, the full value of such protection could not be realized until similar protection is afforded all such material among the nations utilizing such materials. Physical protection measures similar to those proposed, which are based on the recommendations of the IAEA Information Circular INFCIRC/225/Rev. 1, have already been adopted by several countries.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Parts 70, 73, and 150 are published as a document subject to codification.

44 FR 47918  
Published 8/16/79  
Effective 9/17/79

*Licensing of Production and Utilization  
Facilities; Facilities and Access for  
Resident Inspection*

See Part 50 Statements of Consideration.

44 FR 68184  
Published 11/28/79  
Effective 3/25/80

*Physical Protection Upgrade Rule*

See Part 73 Statements of Considerations.

45FR14199  
Published 3/5/80  
Effective 3/5/80

*Minor and Clarifying Amendments*

See Part 1 Statements of Consideration

45 FR 18905  
Published 3/24/80  
Effective 3/24/80

*Deletion of reference to Panama Canal  
Zone; Minor Amendments*

See Part 4 Statements of Consideration.

45 FR 50705  
Published 7/31/80  
Effective 7/31/80

*Safeguards on Nuclear Material-  
Implementation of US/IAEA Agreement*

See Part 75 Statements of Consideration .

45 FR 55402  
Published 8/19/80  
Effective 11/3/80

*Emergency Planning*

See Part 50 Statements of Consideration

➤ 45 FR 65521  
Published 10/3/80  
Effective 11/17/80

*Uranium Mill Licensing Requirements*

See Part 30 Statements of Consideration

## PART 150 • STATEMENTS OF CONSIDERATION

On February 8, 1974, the Atomic Energy Commission published in the *FEDERAL REGISTER* (38 FR 4930) proposed amendments to its regulations in 10 CFR Part 70, "Special Nuclear Material," and 10 CFR Part 150, "Exemptions and Continued Regulatory Authority in Agreement States Under Section 274," which would require reporting of theft or attempted theft of special nuclear material in the interest of the common defense and security.

Interested parties were invited to submit comments and suggestions for consideration pertaining to the proposed amendments by March 25, 1974. Upon consideration of the comments received, and other factors involved, the Commission has adopted the proposed amendments with minor editorial and clarifying changes.

These reporting requirements are being promulgated as part of an overall AEC effort to strengthen the protection of strategically important special nuclear material.

In the interest of the common defense and security, the Commission has found that good cause exists for making the amendments effective upon publication in the *FEDERAL REGISTER* without the customary 30-day notice.

Pursuant to the Atomic Energy Act of 1954, as amended, and sections 552 and 553 of Title 5 of the United States Code, the following amendments of 10 CFR Parts 70 and 150 are published as a document subject to codification.

40 FR 8774  
Published 3/3/75  
Effective 3/3/75

*Energy Reorganization Act; Revisions to Chapter 1 to Reflect Organizational and Procedural Changes*

See Part 2 Statements of Consideration.

41 FR 16445  
Published 4/19/76  
Effective 4/19/76

*Miscellaneous Changes to Chapter*

See Part 20 Statements of Consideration.

41 FR 18300  
Published 5/3/76  
Effective 6/2/76

*Preservation of Records*

See Part 20 Statements of Consideration.

42 FR 25721  
Published 5/19/77  
Effective 5/19/77

*GAO Clearances; Reporting and Record Keeping Requirements*

See Part 20 Statements of Consideration.

42 FR 33265  
Published 6/30/77  
Effective 6/30/77

*Certain Reporting Dates Changed*

See Part 30 Statements of Consideration.

42 FR 43965  
Published 9/1/77  
Effective 9/1/77

*Amendments to Chapter to Revoke or Revise Certain Reporting Requirements*

See Part 20 Statements of Consideration.

44 FR 43280  
Published 7/24/79  
Effective 11/21/79

*Safeguard Requirements for Special Nuclear Material of Moderate and Low Strategic Significance*

See Part 70 Statements of Consideration.

44 FR 50012  
Published 8/24/79  
Effective 8/24/79  
Comment Period expires 10/24/79

*Uranium Mill Tailings Licensing*

See Part 40 Statements of Consideration.

44 FR 68184  
Published 11/28/79  
Effective 3/25/80

*Physical Protection Upgrade Rule*

See Part 73 Statements of Considerations.

45 FR 12377  
Published 2/26/80  
Effective 2/26/80

*Uranium Mill Tailings Licensing*

See Part 40 Statements of Consideration.

45FR14199  
Published 3/5/80  
Effective 3/5/80

*Minor and Clarifying Amendments*

See Part 1 Statements of Consideration

45 FR 18905  
Published 3/24/80  
Effective 3/24/80

*Deletion of reference to Panama Canal Zone; Minor Amendments*

See Part 4 Statements of Consideration.

45 FR 50705  
Published 7/31/80  
Effective 7/31/80

*Safeguards on Nuclear Material-Implementation of US/IAEA Agreement*

See Part 75 Statements of Consideration.

➤ 45 FR 65521  
Published 10/3/80  
Effective 11/17/80

*Uranium Mill Licensing Requirements*

See Part 30 Statements of Consideration

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UNITED STATES NUCLEAR REGULATORY COMMISSION

RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

SUPPLEMENT NUMBER

3

(October 6, 1980 - October 17, 1980)

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## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

(a-1) *Early consideration of site suitability issues.* An applicant for a construction permit for a utilization facility which is subject to § 51.5(a) of this chapter and is of the type specified in §§ 50.21(b) (2) or (3) or 50.22 of this chapter or is a testing facility, may request that the Commission conduct an early review and hearing and render an early partial decision in accordance with Subpart F on issues of site suitability within the purview of the applicable provisions of Parts 50, 51 and 100 of this chapter. In such cases, the applicant for the construction permit may submit the information required of applicants by the provisions of this chapter in three or (in the case of nuclear power reactors) two parts as follows:

(1) Part one shall include or be accompanied by the information required by §§ 50.34(a)(1) and 50.30(f) of this chapter which relates to the issue(s) of site suitability for which an early review, hearing and partial decision are sought, except that information with respect to operation of the facility at the projected initial power level need not be supplied, and shall include the information required by §§ 50.30(e)-(e) and 50.37 of this chapter. The information submitted shall also include (i) proposed findings on the issues of site suitability on which the applicant has requested review and a statement of the bases or the reasons for these findings, (ii) a range of postulated facility design and operation parameters that is sufficient to enable the Commission to perform the requested review of site suitability issues under the applicable provisions of Parts 50, 51 and 100, and (iii) information concerning the applicant's site selection process and long-range plans for ultimate development of the site required by § 2.603(b) (1).

(2) Part two shall include or be accompanied by the remaining information required by §§ 50.30(f), 50.33 and 50.34(a) (1) of this chapter.

(3) Part three shall include the remaining information required by §§ 50.34(a) and (in the case of a nuclear power reactor) 50.34a of this chapter.

(4) The information required for part two or part three shall be submitted during the period the partial decision on part one is effective. Submittal of the information required for part three may precede by no more than six months or follow by no more than six months the submittal of the information required for part two.

(5) Part four,\* which is only required when the application is for a construction permit for a nuclear power reactor, shall include any information required by § 50.33a of this chapter and shall be filed in accordance with the time periods specified in § 50.33a.

(b) After the application has been docketed, each applicant for a license for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee shall serve a copy of the application and environmental report, as appropriate, on the chief executive of the municipality in which the activity is to be conducted or, if the activity is not to be conducted within a municipality on the chief executive of the county, and serve a notice of availability of the application or environmental report on the chief executives of the municipalities or counties which have been identified in the application or environmental report as the location of all or part of the alternative sites, containing the following information: Docket number of the application; a brief description of the proposed site and facility; the location of the site and facility as primarily proposed and alternatively listed; the name, address, and telephone number of the applicant's representative who may be contacted for further information; notification that a draft environmental impact statement will be issued by the Commission and will be made available upon request to the Commission; and notification that if a request is received from the appropriate chief executive, the applicant will transmit a copy of the application and environmental report, and any changes to such documents which affect the alternative site location, to the executive who makes the request. In complying with the requirements of this paragraph (b) the applicant should not make public distribution of those parts of the application subject to § 2.790(d). The applicant shall submit to the Director of Nuclear Material Safety and Safeguards an affidavit that service of the notice of availability of the application or environmental report has been completed along with a list of names and addresses of those executives upon whom the notice was served.

(c) The notice published in the FEDERAL REGISTER announcing docketing of the antitrust information part of the application for a facility license under section 103 of the Act, except for those applications described in § 2.102(d) (2), will state that:

(1) The portion of the application filed

\*For a construction permit application in four parts, part four shall be filed second in time since it must precede both parts two and three by a period of from 9 months to 3 years.

contains the information requested by the Attorney General for the purpose of an antitrust review of the application as set forth in Appendix L to Part 50 of this chapter;

(2) Upon receipt and acceptance for docketing of the remaining portions of the application dealing with radiological health and safety and environmental matters, notices of receipt will be published in the FEDERAL REGISTER including an appropriate notice of hearing; and

(3) Any person who wishes to have his views on the antitrust matters of the application presented to the Attorney General for consideration should submit such views within sixty (60) days after publication of the notice announcing receipt of the antitrust information to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Chief, Antitrust and Indemnity Group.

(d) The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, will give notice of the docketing of the public health and safety, common defense and security, and environmental parts of an application for a license for a facility, or for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee, to the Governor or other appropriate official of the State in which the facility is to be located or the activity is to be conducted, and will cause to be published in the FEDERAL REGISTER a notice of docketing of the application which states the purpose of the application and specifies the location at which the proposed activity would be conducted.

(e) The notice published in the FEDERAL REGISTER of docketing of the application for a facility operating license under section 104b of the Act will, when appropriate, also state that any person who intervened or sought, by timely written notice to the Commission or the Atomic Energy Commission, to intervene in the construction permit proceeding for the facility to obtain a determination of antitrust considerations or to advance a jurisdictional basis for such determination may, within twenty-five (25) days after the date of publication, submit a written petition for leave to intervene and a request for a hearing on the antitrust aspects of the application.

### § 2.102 Administrative review of application.

During review of an application by the staff, an applicant may be requested to supply additional information. The staff may request any one party to the proceeding to confer with the staff informally. In the case of a docketed application for a construction permit or an operating license for a facility, the staff shall establish a schedule for its review of the application, specifying the key intermediate steps from the time of docketing until the completion of its review.

## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

(b) The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, will refer the docketed application to the ACRS as required by law and in such additional cases as he or the Commission may determine to be appropriate. The ACRS will render to the Commission one or more reports as required by law or as requested by the Commission.

(c) The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, will make each report of the ACRS a part of the record of the docketed application, and transmit copies to the appropriate State and local officials.

(d) (1) The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate will refer and transmit a copy of each docketed application for a construction permit or an operating license for a utilization or production facility under section 103 of the Act (and each request, in a proceeding for an operating license for a utilization or production facility under section 104b of the Act, by any person who intervened or sought by timely written notice to the Commission to intervene in the construction permit proceeding to obtain a determination of antitrust considerations) to advance a jurisdictional basis for such determination for an antitrust review under section 105c of the application for an operating license) to the Attorney General as required by section 105c of the Act.

(2) The requirements of subparagraph (1) of this paragraph (d) do not apply to an application for an operating license for a production or utilization facility under section 103 of the Act for which the construction permit was also issued under section 103, unless the Commission determines, after consultation with the Attorney General, that such review is advisable on the ground that significant changes in the licensee's activities or proposed activities have occurred subsequent to the previous review by the Attorney General and the Commission under section 105c of the Act in connection with the construction permit.

(3) The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, will cause the Attorney General's advice received pursuant to subparagraph (1) of this paragraph (d) to be published in the FEDERAL REGISTER promptly upon receipt, and will make such advice a part of the record in any proceeding on antitrust matters conducted in accordance with subsections 105c(5) and section 189a of the Act. The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, will also cause to be published in the FEDERAL REGISTER a notice that the Attorney General has not rendered any such advice. Any notice published in the FEDERAL REGISTER pursuant to this subparagraph will also include a notice of hearing, if appropriate, or will state that any person whose interest may be affected by the proceeding may, pursuant to and in accordance with § 2.714, file a petition for leave to intervene and re-

quest a hearing on the antitrust aspects of the application. The notice will state that petitions for leave to intervene and requests for hearing shall be filed within 30 days after publication of the notice.

### § 2.103 Action on applications for byproduct, source, special nuclear material, and operator licenses.

(a) If the Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, finds that an application for a byproduct, source, special nuclear material, or operator license complies with the requirements of the Act and this chapter, he will issue a license. If the license is for a facility or for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee, the Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate will inform the State and local officials specified in § 2.104(e) \* of the issuance of the license.

(b) If the Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, finds that an application does not comply with the requirements of the Act and this chapter he may issue a notice of proposed denial or a notice of denial of the application and inform the applicant in writing of:

- (1) The nature of any deficiencies or the reason for the proposed denial or the denial, and
- (2) The right of the applicant to demand a hearing within twenty (20) days from the date of the notice or such longer period as may be specified in the notice.

### HEARING ON APPLICATION—HOW INITIATED

#### § 2.104 Notice of hearing.

(a) In the case of an application on which a hearing is required by the Act or this chapter, or in which the Commission finds that a hearing is required in the public interest, the Secretary will issue a notice of hearing to be published in the FEDERAL REGISTER as required by law at least fifteen (15) days, and in the case of an application concerning a construction permit for a facility of the type described in § 50.21(b) or § 50.22 of this chapter or a testing facility, at least thirty (30) days, prior to the date set for hearing in the notice.<sup>1</sup>

In addition, in the case of an application for a construction permit for a facility of the type described in § 50.22 of this chapter, or a testing facility, the notice (other than a notice pursuant to paragraph (d) of this section) shall be issued as soon as practicable after the application has been docketed: *Provided*, That if the Commission, pursuant to § 2.101(a)(2), decides to determine the acceptability of the application on the basis of its technical adequacy as well as completeness, the notice shall be issued as soon as practicable after the application has been tendered.

The notice will state: \*

- (1) The time, place, and nature of the hearing and/or prehearing conference, if any;
- (2) The authority under which the hearing is to be held;
- (3) The matters of fact and law to be considered; and
- (4) The time within which answers to the notice shall be filed.

(b) In the case of an application for a construction permit for a facility on which the Act requires a hearing, the notice of hearing will, except as provided in paragraph (d) of this section and unless the Commission determines otherwise, state, in implementation of paragraph (a)(3) of this section:

(1) That, if the proceeding is a contested proceeding, the presiding officer will consider the following issues:<sup>2</sup>

(i) Whether in accordance with the provisions of § 50.35a of this chapter:

(a) The applicant has described the proposed design of the facility, including, but not limited to, the principal architectural and engineering criteria

<sup>1</sup> If the notice of hearing concerning an application for a construction permit for a facility of the type described in § 50.21(b) or § 50.22 of this chapter or a testing facility does not specify the time and place of initial hearing, a subsequent notice will be published in the FEDERAL REGISTER which will provide at least thirty (30) days notice of the time and place of that hearing. After this notice is given the presiding officer may reschedule the commencement of the initial hearing for a later date or reconvene a recessed hearing without again providing thirty (30) days notice.

<sup>2</sup> Issues (i) to (iv) are the issues pursuant to the Atomic Energy Act of 1954, as amended. Issue (v) is the issue pursuant to the National Environmental Policy Act of 1969.

\* Correction



## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

(a) A request for the production of an NRC record or document not available pursuant to § 2.790 by a party to an initial licensing proceeding may be served on the Executive Director for Operations without leave of the Commission or the presiding officer. The request shall set forth the records or documents requested, either by individual item or by category, and shall describe each item or category with reasonable particularity and shall state why that record or document is relevant to the proceeding.

(b) If the Executive Director for Operations objects to producing a requested record or document on the grounds that (1) it is not relevant or (2) it is exempted from disclosure under § 2.790 and the disclosure is not necessary to a proper decision in the proceeding or the document or the information therein is reasonably obtainable from another source, he shall so advise the requesting party.

(c) If the Executive Director for Operations objects to producing a record or document, the requesting party may apply to the presiding officer, in writing, to compel production of that record or document. The application shall set forth the relevancy of the record or document to the issues in the proceeding. The application shall be processed as a motion in accordance with § 2.730(a) through (d). The record or document covered by the application shall be produced for the "in camera" inspection of the presiding officer, exclusively, if requested by the presiding officer and only to the extent necessary to determine—

- (1) The relevancy of that record or document;
- (2) Whether the document is exempt from disclosure under § 2.790;
- (3) Whether the disclosure is necessary to a proper decision in the proceeding;
- (4) Whether the document or the information therein is reasonably obtainable from another source.

(d) Upon a determination by the presiding officer that the requesting party has demonstrated the relevancy of the record or document and that its production is not exempt from disclosure under § 2.790 or that, if exempt, its disclosure is necessary to a proper decision in the proceeding, and the document or the information therein is not reasonably obtainable from another source, he shall order the Executive Director for Operations to produce the document.

(e) [Deleted 40 FR 2973.]

(f) A ruling by the presiding officer, the Atomic Safety and Licensing Appeal Board, or the Commission for the production of a record or document will specify the time, place, and manner of production.

(g) No request pursuant to this section shall be made or entertained before the matters in controversy have been identified by the Commission or the presiding officer, or after the beginning of the prehearing conference held pursuant to § 2.752 except upon leave of the presiding officer for good cause shown.

(h) The provisions of § 2.740 (c) and (e) shall apply to production of NRC records and documents pursuant to this section.

### SUMMARY DISPOSITION ON PLEADINGS

#### § 2.749 Authority of presiding officer to dispose of certain issues on the pleadings.

(a) Any party to a proceeding may, at least forty-five (45) days before the time fixed for the hearing, move, with or without supporting affidavits, for a decision by the presiding officer in that party's favor as to all or any part of the matters involved in the proceeding. There shall be annexed to the motion a separate, short and concise statement of the material facts as to which the moving party contends that there is no genuine issue to be heard. Any other party may serve an answer supporting or opposing the motion, with or without affidavits, within twenty (20) days after service of the motion. There shall be annexed to any answer opposing the motion a separate, short and concise statement of the material facts as to which it is contended that there exists a genuine issue to be heard. All material facts set forth in the statement required to be served by the moving party will be deemed to be admitted unless controverted by the statement required to be served by the opposing party. The presiding officer shall permit the opposing party an opportunity to respond in writing to new facts and arguments presented in any supporting statements which were not presented in the papers of the moving party. Any such response shall be served within such time limits as the presiding officer may establish and shall address only the new facts and arguments presented in the supporting statement. No further supporting statements or responses thereto shall be entertained.

(b) Affidavits shall set forth such facts as would be admissible in evidence and shall show affirmatively that the affiant is competent to testify to the matters stated therein. The presiding officer may permit affidavits to be supplemented or opposed by depositions, answers to interrogatories or further affidavits. When a motion for summary decision is made and supported as provided in this section, a party opposing the motion may not rest upon the mere allegations or denials of his answer; his answer by affidavits or as otherwise provided in this section must set forth specific facts showing that there is a genuine issue of fact. If no such answer is filed, the decision sought, if appropriate, shall be rendered.

(c) Should it appear from the affidavits of a party opposing the motion that he cannot, for reasons stated, present by affidavit facts essential to justify his opposition, the presiding officer may refuse the application for summary decision or may order a continuance to permit affidavits to be obtained or make such other order as is appropriate and a determination to that effect shall be made a matter of record.

(d) The presiding officer shall render the decision sought if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law. However, if any proceeding involving a construction permit for a production or utilization facility, the procedure described in this section may be used only for the determination of specific subordinate issues and may not be used to determine the ultimate issue as to whether the permit shall be issued.

### HEARINGS

#### § 2.750 Official reporter; transcript.

(a) A hearing will be reported under the supervision of the presiding officer, stenographically or by other means, by an official reporter who may be designated from time to time by the Commission or may be a regular employee of the Commission. The transcript prepared by the reporter shall be the sole official transcript of the proceeding. Except as limited pursuant to Section 181 of the Act

## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

or order of the Commission, the transcript will be open for inspection at the Public Document Room. Copies of transcripts are available to parties and to the public from the official reporter on payment of the charges fixed therefor.

(b) Transcript corrections: Corrections of the official transcript may be made only in the manner provided by this paragraph. Corrections ordered or approved by the presiding officer shall be included in the record as an appendix, and when so incorporated the Secretary shall make the necessary physical corrections in the official transcript so that it will incorporate the changes ordered. In making corrections there shall be no substitution of pages but, to the extent practicable, corrections shall be made by running a line through the matter to be changed without obliteration and writing the matter as changed immediately above. Where the correction consists of an insertion, it shall be added by rider or interlineation as near as possible to the text which is intended to precede and follow it.

(c) Free transcript: Except in an antitrust proceeding, in any adjudicatory proceeding on an application for a license or an amendment thereto, the presiding officer may arrange for provision of one free transcript to a party, other than the applicant, upon request by that party. The transcript will be made available to a party at the same time and location as it is made available to the NRC staff. If a transcript is mailed to the staff, it will also be mailed to the requesting party. A presiding officer has the discretion to control the distribution of transcripts to parties.<sup>1</sup>

### § 2.751 Hearings to be public.

Except as may be requested pursuant to Section 181 of the Act, all hearings will be public unless otherwise ordered by the Commission.

<sup>1</sup>Amended 45 FR 54725

<sup>1</sup>This paragraph shall be in effect for one year from July 25, 1980 unless extended by the Commission. Notice of an extension will appear in the Federal Register.

### § 2.751a Special prehearing conference in construction permit and operating license proceedings.

(a) In any proceeding involving an application for a construction permit or an operating license for a production or utilization facility, the Commission or the presiding officer will direct the parties and any petitioners for intervention, or their counsel, to appear at a specified time and place, within ninety (90)\* days after the notice of hearing is published, or such other time as the Commission or the presiding officer may deem appropriate, for a conference<sup>7</sup> to:

(1) Permit identification of the key issues in the proceeding;

(2) Take any steps necessary for further identification of the issues;

(3) Consider all intervention petitions to allow the presiding officer to make such preliminary or final determination as to the parties to the proceeding, as may be appropriate; and

(4) Establish a schedule for further actions in the proceeding.

(b) The presiding officer may order any further informal conferences among the parties, including telephone conferences, to the extent that he considers that such a conference would expedite the proceeding.

(c) A prehearing conference held pursuant to this section may be stenographically reported.

(d) The presiding officer shall enter an order which recites the action taken at the conference, the schedule for further actions in the proceeding, any agreements by the parties, and which identifies the key issues in the proceeding, makes a preliminary or final determination as to the parties in the proceeding, and provides for the submission of status reports on discovery. The order shall be served upon all parties to the proceeding. Objections to the order may be filed by a party within five (5) days after service of the order, except that the staff may file objections to such order within ten (10) days after service. The board may revise the order in the light of the objections presented and, as permitted by § 2.718(i), may certify for determination to the Commission or the Atomic Safety and Licensing Appeal Board, as appropriate, such matters raised in the objections as it deems appropriate. The order shall control the subsequent course of the proceeding unless modified for good cause.

<sup>7</sup>This conference may be omitted in proceedings other than contested proceedings.

# PART 20 • STANDARDS FOR PROTECTION AGAINST RADIATION

dix D with copies to the Director of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, setting forth the following information:

(1) A description of the licensed material involved, including kind, quantity, chemical, and physical form;

(2) A description of the circumstances under which the loss or theft occurred;

(3) A statement of disposition or probable disposition of the licensed material involved;

(4) Radiation exposures to individuals, circumstances under which the exposures occurred, and the extent of possible hazard to persons in unrestricted areas;

(5) Actions which have been taken, or will be taken, to recover the material; and

(6) Procedures or measures which have been or will be adopted to prevent a recurrence of the loss or theft of licensed material.

(c) Subsequent to filing the written report the licensee shall also report any substantive additional information on the loss or theft which becomes available to the licensee, within 30 days after he learns of such information.

(d) Any report filed with the Commission pursuant to this section shall be so prepared that names of individuals who may have received exposure to radiation are stated in a separate part of the report.

## § 20.403 Notifications of incidents.

(a) *Immediate notification.* Each licensee shall immediately notify by telephone and telegraph, mailgram, or facsimile, the Director of the appropriate NRC Regional Office listed in Appendix D of any incident involving byproduct, source, or special nuclear material possessed by him and which may have caused or threatens to cause:

(1) Exposure of the whole body of any individual to 25 rems or more of radiation; exposure of the skin of the whole body of any individual of 150 rems or more of radiation; or exposure of the feet, ankles, hands or forearms of any individual to 375 rems or more of radiation; or

(2) The release of radioactive material in concentrations which, if averaged over a period of 24 hours, would exceed 5,000 times the limits specified for such materials in Appendix B, Table II; or

(3) A loss of one working week or

more of the operation of any facilities affected; or

(4) Damage to property in excess of \$200,000. ‡

(b) *Twenty-four hour notification.* Each licensee shall within 24 hours notify by telephone and telegraph, mailgram, or facsimile, the Director of the appropriate NRC Regional Office listed in Appendix D of any incident involving licensed material possessed by him and which may have caused or threatens to cause:

(1) Exposure of the whole body of any individual to 5 rems or more of radiation; exposure of the skin of the whole body of any individual to 30 rems or more of radiation; or exposure of the feet, ankles, hands, or forearms to 75 rems or more of radiation; or

(2) The release of radioactive material in concentrations which, if averaged over a period of 24 hours, would exceed 500 times the limits specified for such materials in Appendix B, Table II; or

(3) A loss of one day or more of the operation of any facilities affected; or

(4) Damage to property in excess of \$2,000. ‡

(c) Any report filed with the Commission pursuant to this section shall be prepared so that names of individuals who have received exposure to radiation will be stated in a separate part of the report.

(d) For nuclear power reactors licensed under § 50.21 or § 50.22, the incidents included in paragraph (a) and paragraph (b) in this section shall in addition be reported pursuant to § 50.72.

‡ Amended 42 FR 43965.

\*Correction

# PART 20 • STANDARDS FOR PROTECTION AGAINST RADIATION

radiation or concentrations of radioactive material (whether or not involving excessive exposure of any individual) in an unrestricted area in excess of ten times any applicable limit set forth in this part or in the license. Each report required under this paragraph shall describe the extent of exposure of individuals\*\*

to radiation or to radioactive material, including estimates of each individual's exposure as required by paragraph (b) of this section; levels of radiation and concentrations of radioactive material involved; the cause of the exposure, levels or concentrations; and corrective steps taken or planned to assure against a recurrence.

(b) Any report filed with the Commission pursuant to this section shall include for each individual exposed the name, social security number, and date of birth; and an estimate of the individual's exposure. The report shall be prepared so that this information is stated in a separate part of the report.

(c) [Deleted 38 FR 22220.]

§ 20.406 [Deleted 38 FR 22220.]

§ 20.407 Personnel monitoring reports.

Each person described in § 20.408 of this part shall, within the first quarter of each calendar year, submit to the Director of Management and Program Analysis, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, the reports specified in paragraphs (a) and (b) of this section covering the preceding calendar year. All other persons specifically licensed by the Commission shall, within the first quarter of calendar years 1979 and 1980, submit to the Director of Management and Program Analysis, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, the reports specified in paragraphs (a) and (b) of this section covering the preceding calendar years 1978 and 1979.

(a) A report of either (1) the total number of individuals for whom personnel monitoring was required under §§ 20.202(a) or 34.33(a) of this chapter during the calendar year; or (2) the total number of individuals for whom personnel monitoring was provided during the calendar year. *Provided, however,* That such total includes at least the number of individuals required to be reported under paragraph (a)(1) of this section. The report shall indicate whether it is submitted in accordance with paragraph (a)(1) or

\* A licensee whose license expires or terminates prior to, or on the last day of the calendar year, shall submit reports at the expiration or termination of the license, covering that part of the year during which the license was in effect.

\*\* The Commission will evaluate the data obtained for 1978 and 1979 pursuant to this paragraph, and the benefits derived therefrom and may take action, including publication of notice of proposed rulemaking, to extend or otherwise modify this reporting requirement.

‡ Amended 42 FR 43965.

(a)(2) of this section. If personnel monitoring was not required to be provided to any individual by the licensee under §§ 20.202(a) or 34.33(a) of this chapter during the calendar year, the licensee shall submit a negative report indicating that such personnel monitoring was not required.

(b) A statistical summary report of the personnel monitoring information recorded by the licensee for individuals for whom personnel monitoring was either required or provided, as described in paragraph (a) of this section, indicating the number of individuals whose total whole body exposure recorded during the previous calendar year was in each of the following estimated exposure ranges:

| Estimated whole body exposure range (mrem) | Number of individuals in each range |
|--------------------------------------------|-------------------------------------|
|--------------------------------------------|-------------------------------------|

|                                   |  |
|-----------------------------------|--|
| No measurable exposure            |  |
| Measurable exposure less than 0.1 |  |
| 0.1 to 0.25                       |  |
| 0.25 to 0.5                       |  |
| 0.5 to 0.75                       |  |
| 0.75 to 1                         |  |
| 1 to 2                            |  |
| 2 to 3                            |  |
| 3 to 4                            |  |
| 4 to 5                            |  |
| 5 to 6                            |  |
| 6 to 7                            |  |
| 7 to 8                            |  |
| 8 to 9                            |  |
| 9 to 10                           |  |
| 10 to 11                          |  |
| 11 to 12                          |  |
| 12                                |  |

\* Individual values exactly equal to the values separating exposure ranges shall be reported in the higher range.

The low exposure range data are required in order to obtain better information about the exposures actually recorded. This section does not require improved measurements.

§ 20.408 Reports of personnel monitoring on termination of employment or work.

(a) This section applies to each person licensed by the Commission to:

(1) Operate a nuclear reactor designed to produce electrical or heat energy pursuant to § 50.21(b) or § 50.22 of this chapter or a testing facility as defined in § 50.2(c) of this chapter;

(2) Possess or use byproduct material for purposes of radiography pursuant to Parts 30 and 34 of this chapter;

(3) Process or use at any one time, for purposes of fuel processing, fabrication, or reprocessing, special nuclear material in a quantity exceeding 5,000 grams of contained uranium-235, uranium-233, or plutonium or any combination thereof pursuant to Part 70 of this chapter; or

(4) Possess or use at any one time, for processing or manufacturing for distribution pursuant to part 30, 32, or 33 of this chapter, byproduct material in quantities exceeding any one of the following quantities:

\*\* Amended 43 FR 29270.

§ 20.404 [Deleted 38 FR 22220.]

§ 20.105 Reports of overexposures and excessive levels and concentrations.

(a) In addition to any notification required by § 20.403, each licensee shall make a report in writing within 30 days to the appropriate NRC Regional Office listed in Appendix D with a copy to the Director of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, of:

(1) each exposure of an individual to radiation in excess of the applicable limits in §§ 20.101 or 20.104 (a) or the license; (2) each exposure of an individual to radioactive material in excess of the applicable limits in §§ 20.103(a)(1), 20.103(a)(2), 20.104(b) or the license; (3) levels of radiation or concentrations of radioactive material in a restricted area in excess of any other applicable limit in the license; (4) any incident for which notification is required by § 20.403; and (5) levels of ra-



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prohibitions would be overexposures resulting from the acts of employees acting with or without management direction in using licensed material.

Accordingly, it is proposed that §§ 20.101, 20.103, 20.104 (a), (b) and 20.105 be amended to clarify this matter by adding the words "or permit" to §§ 20.101, 20.104 (a), (b), 20.105, and by adding the words "cause or" to § 20.103. Paragraph 20.201(b) currently states that:

(b) Each licensee shall make or cause to be made such surveys as may be necessary for him to comply with the regulations in this part.

The purpose of the survey requirement in 10 CFR 20.201(b) is to assure that licensees have evaluated radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation in order that compliance with Commission requirements is by design and not fortuitous. Licensees have at times argued that enforcement of the survey requirement in § 20.201(b) is limited to situations where the failure to survey or the performance of an inadequate survey resulted in noncompliance with some other requirement of 10 CFR Part 20. While the current language of § 20.201(b) is susceptible to such a reading, the Commission over the years has given the section a broader construction. The regulation has been redrafted to clarify the intent of the survey requirement to assure that licensees are on notice that the requirement is to make appropriate surveys and that the requirement may be violated even if noncompliance with some other requirement of Part 20 does not result from the failure to survey or from the performance of an inadequate survey.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of Title 5 of the United States Code, notice is hereby given that adoption of the following amendments to Title 10, Chapter I, Code of Federal Regulations, Part 20 is contemplated.

### § 20.101 [Amended]

1. Paragraph 20.101(a) of 10 CFR Part 20 is amended by deleting the words "as to cause any individual in a restricted area" and substituting therefor "as to cause or permit any individual in a restricted area".

### § 20.103 [Amended]

2. Paragraphs 20.103(a)(1) and 20.103(a)(2) are amended by deleting the words "as to permit any individual in a restricted area" and substituting therefor "as to cause or permit any individual in a restricted area".

### § 20.104 [Amended]

3. Paragraphs 20.104(a) and 20.104(b) are amended by deleting the words "as to cause any individual within a restricted area" and substituting therefor "as to cause or permit any individual in a restricted area".

### § 20.105 [Amended]

4. The last sentence of paragraph 20.105(a) is amended by deleting the words "proposed limits are not likely to cause any individual" and substituting therefor "proposed limits are not likely to cause or permit any individual".

5. Paragraph 20.201(b) is revised to read as follows:

### § 20.201 Surveys.

\* \* \* \* \*

(b) Each licensee shall make or cause to be made such surveys as are reasonably called for by circumstances surrounding the use of source, byproduct, or special nuclear material.

## ➤ 45 FR 67018

Published 10/8/80

Comment period expires 11/24/80

### 10 CFR Part 20

#### Standards for Protection Against Radiation

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The NRC is considering amending its regulations to permit licensees greater leeway in disposing of liquid scintillation media and animal carcasses containing tracer levels of hydrogen-3 (tritium) or carbon-14. Most licensees presently dispose of these items by sending them to a radioactive waste burial ground or by obtaining special authorization from NCR for incineration or on site burial. Under the proposed regulations, the licensee may dispose of specified concentrations of these materials without regard to their radioactivity. The NRC is also considering amending its regulations to raise the annual limits for disposal of hydrogen-3 and carbon-14 by release to the sanitary sewerage system. The proposed rule changes would conserve waste burial capacity that is already in short supply.

**DATE:** Comment period expires November 24, 1980.

**Note.**—Comments received after the expiration date will be considered if it is practical to do so, but assurance of consideration cannot be given except as to comments filed on or before that date.

**ADDRESSES:** Interested persons are invited to submit written comments and suggestions for consideration on the proposed amendments to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, attention: Docketing and Service Branch. Copies of the preliminary value/impact analysis and of comments received may be examined at the Commission's Public Document Room at 1717 H Street NW, Washington, D. C. Single copies of the preliminary value/impact analysis are available from John R. Cook at the phone number and address listed below.

**FOR FURTHER INFORMATION CONTACT:** John R. Cook, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Telephone: 301-427-4240).

**SUPPLEMENTARY INFORMATION:** Radionuclide tracers are used extensively in biomedical research and for the diagnosis of diseases in humans. One of the end products of these research and medical activities is

approximately 9% of the total volume of radioactive waste shipped to burial grounds that is not related to nuclear power generation and its supporting fuel cycle.

There are other hydrogen-3 and carbon-14 waste streams in the research laboratory that do not result in liquid scintillation vials and animal carcasses; for example, the solutions and attendant material used to prepare the research samples. These materials also contain tracer levels of hydrogen-3 and carbon-14.

Under present NRC regulations, hydrogen-3 and carbon-14 wastes that are readily soluble or dispersible in water can be disposed of by release to the sanitary sewerage system. The annual limit for release to the sanitary sewerage system is found in 10 CFR 20.303 and is limited to a total of 1 curie of all radionuclides per year for each licensee. This proposed rule would raise the limit for hydrogen-3 to 5 curies per year and the limit for carbon-14 to 1 curie per year. This change would result in a negligible addition to the level of these radioisotopes already present in the natural environment.

There are alternatives for disposal of liquid scintillation media and animal carcasses containing hydrogen-3 and carbon-14 other than consignment to a radioactive waste burial ground. Liquid scintillation media can be evaporated, distilled, burned, or buried on a licensee's site if an appropriate location is available. Animal carcasses can be incinerated in a pathogen incinerator. Currently, none of these alternatives to radioactive waste burial are readily available. Generally, liquid scintillation media and animal carcasses with any added hydrogen-3 or carbon-14 are



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refractory material, or do you recommend some other concept? Would you respond differently for different containment types? If so, what differences would you recommend? How do your recommendations affect other safety considerations?

10. Should the NRC require design changes to account for increased radioactive material that may be transported during an accident by systems normally functioning with much lower levels of radioactivity such as the steam and residual heat removal systems and the containment drainage system?

11. Should the NRC require more extensive operator training, strict literal compliance with new and improved detailed operating procedures, increased reliability of emergency cooling or decay heat removal capability, and expanded control room minimum manning as alternatives or supplements to degraded cooling design improvements?

12. Should the NRC require an alternate, add-on, self-contained decay heat removal system to prevent degradation of the core or to cool a degraded core, in contrast to the previously discussed schemes which are aimed toward mitigating the consequences of degraded core cooling? How would such a decay heat removal system affect other safety considerations?

13. Should the NRC require systems such as the makeup and purification systems to be located in a leak-tight building? Would such a requirement add to or detract from overall plant safety?

14. What design, quality and seismic criteria would you recommend for any additional systems to prevent the potential breaching of containment such as systems for controlled filtered venting, hydrogen combustion control, and core retention mentioned in previous questions? Do you favor evaluating designs of such systems on a realistic basis, as opposed to the conservative method used to evaluate engineered safety features? Do you favor establishing design criteria for such systems that are equally stringent, less stringent, or more stringent than those applied to engineered safety features? Please explain your response in terms of criteria you would recommend, including consideration of redundancy, diversity, testability, inspectability, and structural design limits (including seismic requirements).

15. Can probabilistic analysis be used both as an aid in determining and comparing the adequacy and usefulness of the several features mentioned in previous questions and as an aid in determining the design criteria and

reliability requirements for these features? How do you view the utility of quantitative risk analysis in better understanding the safety advantages and disadvantages of the several features mentioned in previous questions?

16. In weighing the costs of design and operational improvements to cope with degraded core cooling against the benefits of their use, what quantitative methods or other guidance would you suggest to facilitate preparation of a useful value-impact assessment? Would you consider useful or appropriate comparisons between nuclear power plant risks and other risks to which people are exposed?

17. What aspects of degraded cooling or melted-core accidents are sufficiently unknown or uncertain as to impede design and analysis of mitigating systems, thus requiring additional research or experimentation?

18. The NRC has under way a separate rulemaking proceeding concerning reactor siting and an emergency planning rule has recently been approved. If you are familiar with these separate activities, how would you modify present and proposed requirements for emergency planning and reactor siting if accidents beyond the present design basis were to be considered in nuclear power plant safety analyses?

➤ 45 FR 67099

Published 10/9/80

Comment period expires 11/24/80

### 10 CFR Part 50

#### Plan To Require Licensees and Applicants to Document Deviations From the Standard Review Plan

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** The Nuclear Regulatory Commission is considering requiring all nuclear power plant licensees and all applicants for construction permits and manufacturing licenses to identify and justify deviations from the acceptance criteria of the applicable revision of the Standard Review Plan, NUREG-75/087. This program will provide the NRC with uniform documentation of the extent to which each plant deviates from current licensing acceptance criteria. Comment is sought on the proposal and on the preferred method of implementing such a proposal.

**DATE:** The comment period expires on November 24, 1980.

**ADDRESSES:** Comments should be submitted in writing to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. All comments received will be available for public inspection in the Commission's Public Document Room at 1717 H Street, NW, Washington, D.C.

#### FOR FURTHER INFORMATION CONTACT:

Malcolm L. Ernst, Assistant Director for Technology, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, (301) 492-8016.

**SUPPLEMENTARY INFORMATION:** The Standard Review Plan (SRP), NUREG 75/087, first published in 1975, was prepared for the guidance of NRC staff reviewers in performing safety reviews of applications to construct or operate nuclear power plants. The principal purpose of the SRP is to ensure the quality and uniformity of the staff reviews and to present a well-defined base from which proposed changes in the scope of these reviews may be evaluated. The SRP also serves to make information about regulatory matters widely available, and improves understanding of the staff review process by interested members of the public and the nuclear power industry.

The NRC's current techniques for the safety evaluation of nuclear power facilities as set forth in the SRP, are the result of years of experience. A great deal of progress has been made in the methods of review and in the development of regulatory guides and other staff positions referenced in the SRP.

As this experience acquired over the years is incorporated into the regulatory process, regulatory guides, including the SRP, are periodically reviewed and revised to reflect the current state-of-the-art. This results in a varying scope of review over time and tends to lead to lack of uniform documentation of each plant's conformance with current staff acceptance criteria. Some plants, for instance, have been reviewed against the SRP at the OL stage but not at the CP stage, while still others, although reviewed against the SRP at both the CP and OL stage, lack uniformity because of updating of the SRP after the CP review was completed. This lack of uniform documentation makes it difficult to determine the extent to which plants reviewed some time ago deviate from current acceptance criteria, and if so, the safety significance of such deviations.

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As a result of the accident at Three Mile Island, many regulatory requirements have been revised and new requirements have been promulgated. Accordingly, the staff has begun to revise the SRP to reflect these new requirements. This next revision of the Standard Review Plan, scheduled for completion in April 1981, will consist of the May 1980 version of the SRP, modified to reference all applicable safety and safeguards regulations and those Division 1 Regulatory Guides, staff positions, and other documents currently used by the staff to interpret the intent of these regulations, including requirements resulting from the TMI accident.

Requiring license applicants to identify and justify deviations from the acceptance criteria in the applicable revision of the SRP would enhance the quality of the staff's review of applications and assist the staff in making the determinations required by 10 CFR Part 50. In addition, such documentation would more clearly identify the bases for the acceptability of plant designs and their relationship to current licensing criteria. A similar post-licensing requirement for currently operating plants would improve the staff's ability to evaluate the extent and safety significance of deviations from current staff acceptance criteria for these plants.

In a related matter, the NRC is required by Section 110 of Public Law 96-295 (NRC FY 80 Authorization Bill) to develop a plan for the systematic safety review of all operating nuclear power plants. This plan must include among other things: the identification of each current rule and regulation, compliance with which the NRC determines to be of particular significance to the protection of the public health and safety; and the determination of the extent to which each currently operating plant complies with those regulations, including an indication of whether such compliance was achieved by use of Division 1 Regulatory Guides and staff positions and where such compliance was achieved by equivalent means.

In order to carry out the requirements of Pub. L. 96-295, to document deviations from the SRP and to improve the staff's ability to evaluate the safety significance of such deviations, the NRC is considering requiring all nuclear power plant licensees and license applicants to identify and provide the safety bases for deviations from applicable revisions of the SRP. Several methods of implementing this requirement are under consideration. These methods are issuance of a Regulatory Guide, specification of a construction permit or operating license condition, a Policy Statement, or rulemaking.

Specifically, the NRC is considering imposing the following requirements:

1. All nuclear power plants issued operating licenses on or before June 30, 1980,<sup>1</sup> would be required to identify and justify all deviations from the acceptance criteria of the SRP revision scheduled to be issued in April 1981 that relate to those regulations which the Commission determines to be of particular significance to the protection of the public health and safety.

2. All applicants who are issued a nuclear power plant operating license after June 30, 1980, and for which the NRC staff's Safety Evaluation Report will be issued on or before January 1, 1982,<sup>2</sup> would be required to identify and justify, after issuance of an OL, all deviations from the acceptance criteria of the SRP revision scheduled to be issued in April 1981 that relate to those regulations the Commission determines to be of particular significance to the protection of the public health and safety.

3. All applicants for a nuclear power plant operating license for which the NRC staff's Safety Evaluation Report is issued after January 1, 1982, would be required to identify and justify, prior to issuance of the operating license, all deviations from all acceptance criteria of the SRP revision scheduled to be issued in April 1981.

4. All applicants for a nuclear power plant construction permit or manufacturing license for which the NRC staff's Safety Evaluation Report TMI Supplement is issued before January 1, 1982, would be required to identify and justify, prior to issuance of the construction permit or manufacturing license, all deviations from all acceptance criteria of the May 1980 version of the SRP and from the "Proposed Licensing Requirements for Pending Applications for Construction Permits and Manufacturing Licenses," in NUREG-0718, (as modified after public comment).

5. All applicants for a nuclear power plant construction permit or manufacturing license for which the NRC staff's Safety Evaluation Report is issued after January 1, 1982, would be required to identify and justify, prior to issuance of the construction permit or manufacturing license, all deviations from all acceptance criteria of the SRP revision scheduled to be issued in April 1981.

The Commission published a Federal Register Notice on October 2, 1980 (45 FR 65247) inviting comment on Requirements 4 and 5 of the current plan. The present notice reiterates those

requirements and integrates them with the requirements for operating plants and applicants for operating licenses.

The Commission will consider public comments received in response to this notice in determining the appropriate action to be taken, including the possible issuance of final rules on some or all of these matters.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Section 553 of Title 5 of the United States Code, notice is hereby given that amendment of the Commission's regulations in 10 CFR Part 50 with regard to some or all of the subjects and issues described in this notice is contemplated.

<sup>1</sup> The revised SRP (April 1981) has been designed and defined to be equivalent to Division 1 Regulatory Guides and staff positions.

<sup>2</sup> The date on which Pub. L. 96-295 became effective.

<sup>3</sup> The basis for the January 1, 1982 date, is to permit adequate time after issuance of the revised SRP for a licensee to document and justify deviations and for the NRC staff to incorporate evaluations of the more safety significant deviations into the staff Safety Evaluation Reports.



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shipment (elements, isotopes, enrichments, etc.).

(5) The number and types of containers.

(6) The name and telephone number of the carrier's representative at each stopover location in U.S. territory.

(7) A description of the physical security system which will be implemented in accordance with a written security plan which shall include the use of armed personnel to protect the shipment during stops at U.S. ports.

(e) Persons generally licensed under this section making unscheduled stops at U.S. ports shall, immediately after the decision to stop:

(1) Provide to the Commission the information required under paragraph (d) of this section; and

(2) Arrange for local law enforcement authorities or trained and qualified private guards to protect the shipment during the stop.

(3) Implement these arrangements within a reasonable time after the arrival of the shipment at a U.S. port to remain in effect until the shipment exits the port.

### PART 73—PHYSICAL PROTECTION OF PLANTS AND MATERIALS

5. Paragraph 73.71(b) of 10 CFR Part 73 is amended to read as follows:

**§ 73.71 Reports of unaccounted for shipments, suspected theft, unlawful diversion, or radiological sabotage.**

(b) Each licensee shall report immediately to the Director of the appropriate Nuclear Regulatory Commission Inspection and Enforcement Regional Office listed in Appendix A, by telephone, any incident in which an attempt has been made, or is believed to have been made, to commit a theft or unlawful diversion of special nuclear material which he is licensed to possess, or to commit an act of radiological sabotage against his plant, or transportation system. The initial report shall be followed within a period of fifteen (15) days by a written report submitted to the appropriate NRC Regional Office shown in Appendix A of this Part setting forth the details of the incident. Copies of such written report shall be sent to the Director of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Subsequent to the submission of the written report required by this paragraph, a licensee shall immediately inform the Director of the appropriate Inspection and Enforcement Regional Office by means

of a written report of any substantive additional information, which becomes available to the licensee, concerning the incident.

45 FR 13739

Published 3/3/80

Comment period expires May 2, 1980

*Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions and Related Conforming Amendments*

See Part 51 Proposed Rule Making.

45FR15154

Published 3/10/80

Comment period expires 5/9/80

*Protection of Employees Who Provide Information*

See Part 19

Proposed Rule Making

45 FR 15937

Published 3/12/80

Comment period expires 5/12/80

### 10 CFR Part 70

#### **Domestic Licensing of Special Nuclear Material; General License Requirements for Any Person Who Possesses Irradiated Special Nuclear Material (SNM) In-Transit**

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The NRC is considering amending its regulations to issue a general license to any person who possesses irradiated reactor fuel in-transit. Under the general license, a person who possesses irradiated reactor fuel in-transit would be subject to certain requirements in §§ 73.37 and 73.71 of 10 CFR Part 73. This action would provide a level of direct control and direct inspection authority over irradiated reactor fuel shipments comparable to that now provided over formula quantities of strategic special nuclear material (SSNM) in-transit.

**DATES:** Comments must be received on or before May 12, 1980.

**FOR FURTHER INFORMATION CONTACT:** Dr. Willard B. Brown, Acting Chief, Safeguards Standards Branch, Division

of Siting, Health and Safeguards Standards, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, 301-443-5907.

**SUPPLEMENTARY INFORMATION:** On May 8, 1979, effective amendments to 10 CFR Part 70 were published, 44 FR 26850, that removed the licensing exemption and granted a general license applying to carriers and other persons who have actual or constructive possession (constructive possession is a form of legal possession of material in a shipment that does not require actual physical custody; it may be evidenced through control over the shipment or by other means) of formula quantities of SSNM for the purpose of transport or storage incident to transport. This provided the NRC with a legal basis (in the absence of a specific license or other formal means) for inspecting shipments of formula quantities of SSNM in-transit. Prior to issuance of the effective amendments, inspections were submitted to on a voluntary basis on the part of the carriers.

On June 15, 1979, effective amendments to 10 CFR Part 73 (§ 73.37) were published (44 FR 34466) that prescribed requirements for the physical protection of irradiated reactor fuel in transit. In their present form, because of the exemption of 10 CFR 70.12, these regulations do not subject to direct regulation carriers and other persons who possess (actually or constructively) irradiated reactor fuel for the purpose of transport or storage incident to transport. This creates the same situation of the shipment of irradiated fuel as existed for the shipment of strategic special nuclear material prior to the removal of the licensing exemption for carriers of that material (44 FR 26850). That is, the NRC has no legal basis for inspecting the irradiated reactor fuel shipments in-transit to verify compliance with Section 73.37. In order to provide a level of control over irradiated fuel shipments comparable to that provided over formula quantities of SSNM in-transit, the Commission is considering amending its regulations to grant a general license to any person who possesses (actually or constructively) irradiated reactor fuel during transport. The general license would pertain only to the carriage or storage in-transit of irradiated fuel subject to 10 CFR 73.37.

Appropriate paragraphs of § 70.20a are being revised to issue a general license to any person who possesses (actually or constructively) irradiated reactor fuel in-transit. The scope of the general license granted under the proposed amendment would be limited

## PART 70 • PROPOSED RULE MAKING

to possession only and would be effective during the course of a shipment. The amendment would not affect the exemption for carriers and other persons under § 70.12 who transport other forms of special nuclear material subject to NRC regulations. Also, the amendment would not apply to transient shipments, that is, shipments that originate in a foreign country with destinations in a foreign country. The proposed amendment would codify practices and procedures presently submitted to on a voluntary basis by most carriers and other persons. The proposed amendment would not require the filing of applications with the Commission or the issuing of licenses to particular persons by the Commission.

The promulgation of the amendment would not result in any activity that affects the environment. Accordingly, the Commission has determined under the National Environmental Policy Act, the Council of Environmental Quality guidelines, and the criteria of 10 CFR Part 51, that neither an environmental impact statement nor environmental impact appraisal to support a negative declaration for the proposed amendment to 10 CFR Part 70 is required.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, notice is hereby given that adoption of the following amendments to Title 10, Chapter I, Code of Federal Regulations, Part 70 is contemplated.

### PART 70—SPECIAL NUCLEAR MATERIAL

1. Section 70.12 of 10 CFR Part 70 is revised to read as follows:

#### § 70.12 Carriers.

Common and contract carriers, freight forwarders, warehousemen, and the U.S. Postal Service are exempt from the regulations in this part to the extent that they transport or store special nuclear material in the regular course of carriage for another or storage incident thereto. This exemption does not apply to the storage in-transit or transport of material by persons covered by the general license issued under § 70.20a of this chapter.

2. Section 70.20a(a) and (c) are revised to read as follows:

#### § 70.20a General license to possess special nuclear material for transport.

(a) A general license is hereby issued to any person to possess formula quantities of strategic special nuclear material of the types and quantities subject to the requirements of §§ 73.20,

73.25, and 73.26, and 73.70(g) of Part 73 of this chapter and irradiated reactor fuel containing material of the types and quantities subject to the requirements of § 73.37 of Part 73 of this chapter, in the regular course of carriage for another or storage incident thereto. The general license is subject to the applicable provisions of §§ 70.32(a) and (b), 70.42, 70.52, 70.55, 70.61, 70.62 and 70.71.

(c) Notwithstanding any other provision of this chapter, the duties of a general licensee under this section while in possession of formula quantities of strategic special nuclear material or irradiated reactor fuel in the regular course of carriage for another or storage incident thereto shall be limited to providing for the physical protection of such material against theft or sabotage. Unless otherwise provided by this section, a general licensee under this section is not subject to the requirements of Part 19, 20, 70, and 73.

#### § 70.20a [Amended]

3. A new § 70.20a(e) is added to read as follows:

(e) Any person who possesses irradiated reactor fuel under this general license shall:

(1) Assure that the transportation is in accordance with the applicable physical protection requirements of § 73.37 of Part 73 of this chapter; and

(2) Comply with the reporting requirements of § 73.71 of Part 73 of this chapter.

➤ 45 FR 66472

Published 10/7/80

Withdrawn 10/1/80

### 10 CFR PART 70

#### Withdrawal of Proposed Rulemaking on Routine Use of Plutonium-238 Powered Cardiac Pacemakers

AGENCY: U.S. Nuclear Regulatory Commission.

ACTION: Withdrawal of proposed rule.

SUMMARY: The Nuclear Regulatory Commission is withdrawing its notice of proposed rulemaking on the routine use of plutonium-238 (a radioactive material) in cardiac pacemakers. In lieu of establishing the proposed general licenses for the implantation, routine use and recovery of plutonium-238 powered cardiac pacemakers, the Commission

will continue to allow their use under specific licenses and existing regulations.

FOR FURTHER INFORMATION CONTACT: Donovan A. Smith, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, telephone: 301-443-5946.

SUPPLEMENTARY INFORMATION: Notice is hereby given that the Nuclear Regulatory Commission is withdrawing its notice of rulemaking that proposed amendments to its regulations in 10 CFR Part 70, "Special Nuclear Material." The amendments would have established (a) general licenses for the implantation, routine use, and recovery of plutonium-238 powered cardiac pacemakers that have been proved reliable and safe under investigational programs of actual use, and (b) the requirements for issuance of specific licenses authorizing distribution of pacemakers for routine use under the general license. The proposed amendments were published in the Federal Register on March 14, 1977, at 42 FR 13834.

The Commission's decision to withdraw the proposed amendments results from technological advances in non-nuclear power sources for pacemakers. These advances have contributed to the development of long-lived conventionally powered pacemakers that satisfy the 10-year design life objective that has been associated with the plutonium-238 powered pacemakers. The availability of the long-lived conventionally powered pacemakers, at a cost substantially less than the cost of the plutonium-238 pacemakers, has caused a reduction in the demand for the plutonium-238 pacemakers. Thus, there no longer appears to be a need for the proposed amendments that were designed to keep track of large numbers of plutonium-238 pacemakers.

Withdrawal of the proposed amendments is not a result of adverse experience with plutonium-238 powered cardiac pacemakers. These pacemakers have been used in the United States since 1972 and the experience has been excellent. The withdrawal is a result of recognition by the Commission that, because of developments in conventionally powered pacemakers, the regulatory system, in the proposed amendments would be administratively burdensome for those few plutonium-238 pacemakers that might be used.

The Commission will continue under existing regulations to specifically license the use of currently distributed and new model plutonium-238 pacemakers. Standard research protocols will be required to be followed

## PART 70 • PROPOSED RULE MAKING

for new models. Consideration will be given to reducing the scope of protocols for further implants of models of demonstrated reliability. Accordingly, where it is desirable to select a pacemaker with the longest possible life, the patient and the patient's physician will have the option of selecting a plutonium-238 pacemaker.

The Commission is publishing, concurrently with this notice, withdrawal of its notice of proposed amendment of 10 CFR Part 150 that would have made the Commission the sole agency regulating the routine use of plutonium-238 in cardiac pacemakers.





**UNITED STATES NUCLEAR REGULATORY COMMISSION**  
**RULES and REGULATIONS**  
**TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY**

**PART**  
**73**

**PHYSICAL PROTECTION OF PLANTS AND MATERIALS**

**General performance objectives and requirements**

**Sec.**

- 73.1 Purpose and scope.
- 73.2 Definitions.
- 73.3 Interpretations.
- 73.4 Communications.
- 73.5 Specific exemptions.
- 73.6 Exemptions for certain quantities and kinds of special nuclear material.
- 73.20 General performance requirements.
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**Physical Protection of Special Nuclear Material in Transit**

**Sec.**

- 73.25 Performance capabilities for physical protection of strategic special nuclear material in transit.
- 73.26 Transportation physical protection systems, subsystems, components, and procedures.
- 73.27 Notification requirements.
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**Physical Protection Requirements at Fixed Sites**

- 73.40 Physical protection: General requirements at fixed sites.
- 73.45 Performance capabilities for fixed site physical protection.
- 73.46 Fixed site physical protection systems, subsystems, components and procedures.
- 73.50 Requirements for physical protection of licensed activities.
- 73.55 Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage.
- 73.60 Additional requirements for the physical protection of special nuclear material at non-power reactors.

**Physical Protection of Special Nuclear Material of Moderate and Low Strategic Significance**

- 73.67 Licensee fixed site and in-transit requirements for the physical protection of special nuclear material of moderate and low strategic significance.

**Records and Reports**

- 73.70 Records.
- 73.71 Reports of unaccounted for shipments, suspected theft, unlawful diversion, or radiological sabotage.
- 73.72 Requirement for advance notice of shipment of special nuclear material.

**Enforcement**

- 73.80 Violations

**Appendices**

- Appendix A—United States Nuclear Regulatory Commission Inspection and

Enforcement Regional Offices  
Appendix B—General Criteria for Security Personnel  
Appendix C—Licensee Safeguards Contingency Plans  
Appendix D—Physical Protection of Irradiated Reactor Fuel in Transit, Training Program Subject Schedule

**Authority:** Secs. 53, 161b, 161i, 161o, Pub. L. 83-703, 88 Stat. 930, 948-50, as amended Pub. L. 85-507, 72 Stat. 327, Pub. L. 93-377, 88 Stat. 475 (42 U.S.C. 2073, 2201); sec. 201, Pub. L. 93-438, 88 Stat. 1242, 1243, as amended Pub. L. 94-79, 89 Stat. 413 (42 U.S.C. 5841).

**§ 73.1 Purpose and scope.**

(a) *Purpose.* This part prescribes requirements for the establishment and maintenance of a physical protection system which will have capabilities for the protection of special nuclear material at fixed sites and in transit and of plants in which special nuclear material is used. The following design basis threats, where referenced in ensuing sections of this part, shall be used to design safeguards systems to protect against acts of radiological sabotage and to prevent the theft of special nuclear material:

(1) *Radiological Sabotage.* (i) A determined violent external assault, attack by stealth, or deceptive actions, of several persons with the following attributes, assistance and equipment: (A) Well-trained (including military training and skills) and dedicated individuals, (B) inside assistance which may include a knowledgeable individual who attempts to participate in a passive role (e.g., provide information), an active role (e.g., facilitate entrance and exit, disable alarms and communications, participate in violent attack), or both, (C) suitable weapons, up to and including hand-held automatic weapons, equipped with silencers and having effective long range accuracy, (D) hand-carried equipment, including incapacitating agents and explosives for use as tools of entry or for otherwise destroying reactor, facility, transporter, or container integrity or features of the safeguards system, and (ii) An internal threat of an insider, including an employee (in any position).

(2) *Theft or Diversion of Formula Quantities of Strategic Special Nuclear Material.* (i) A determined violent external

assault, attack by stealth, or deceptive actions, by a small group with the following attributes, assistance and equipment: (A) Well-trained (including military training and skills) and dedicated individuals, (B) inside assistance which may include a knowledgeable individual who attempts to participate in a passive role (e.g., provide information), an active role (e.g., facilitate entrance and exit, disable alarms and communications, participate in violent attack), or both, (C) suitable weapons, up to and including hand-held automatic weapons, equipped with silencers and having effective long range accuracy, (D) hand-carried equipment, including incapacitating agents and explosives for use as tools of entry or for otherwise destroying reactor, facility, transporter or container integrity or features of the safeguards system, and (E) the ability to operate as two or more teams.

(ii) An individual, including an employee (in any position), and (iii) A conspiracy between individuals in any position who may have: (A) Access to and detailed knowledge of nuclear power plants or the facilities referred to in § 73.20(a), or (B) items that could facilitate theft of special nuclear material (e.g., small tools, substitute material, false documents, etc.), or both.

**§ 73.1 Purpose and scope.**

(b) *Scope.* (1) This part prescribes requirements for (i) the physical protection of production and utilization facilities licensed pursuant to Part 50 of this chapter, (ii) the physical protection of plants in which activities licensed pursuant to Part 70 of this chapter are conducted, and (iii) the physical protection of special nuclear material by any person who, pursuant to the regulations in Part 70 of this chapter, possesses or uses at any site or contiguous sites subject to the control by the licensee, formula quantities of strategic special nuclear material or special nuclear material of moderate strategic significance or special nuclear material of low strategic significance. (2) This part prescribes requirements for the physical protection of special

## PART 73 • PHYSICAL PROTECTION OF PLANTS AND MATERIALS

nuclear material in transportation by any person who is licensed pursuant to the regulations in Part 70 and Part 110 of this chapter who imports, exports, transports, delivers to a carrier for transport in a single shipment, or takes delivery of a single shipment free on board (F.O.B.) where it is delivered to a carrier, formula quantities of strategic special nuclear material, special nuclear material of moderate strategic significance or special nuclear material of low strategic significance.

(3) This part also applies to shipments by air of special nuclear material in quantities exceeding (i) 20 grams or 20 curies, whichever is less, of plutonium or uranium-233, or (ii) 350 grams of uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope)

(4) Special nuclear material subject to this part may also be protected pursuant to security procedures prescribed by the Commission or another Government agency for the protection of classified materials. The provisions and requirements of this part are in addition to, and not in substitution for, any such security procedures. Compliance with the requirements of this part does not relieve any licensee from any requirement or obligation to protect special nuclear material pursuant to security procedures prescribed by the Commission or other Government agency for the protection of classified materials.

(5) This part also applies to the shipment of irradiated reactor fuel in quantities that in a single shipment both exceed 100 grams in net weight of irradiated fuel, exclusive of cladding or other structural or packaging material, and have a total radiation dose in excess of 100 rems per hour at a distance of 3 feet from any accessible surface without intervening shielding.

### § 73.2 Definitions.

As used in this part:

(a) Terms defined in Parts 50 and 70 of this chapter have the same meaning when used in this part.

(b) "Authorized individual" means any individual, including an employee, a student, a consultant, or an agent of a licensee who has been designated in writing by a licensee to have responsibility for surveillance of or control over special nuclear material or to have unescorted access to areas where special nuclear material is used or stored.

(c) "Guard" means a uniformed individual armed with a firearm whose primary duty is the protection of special nuclear material against theft, the protection of a plant against radiological sabotage, or both.

(d) "Watchman" means an individual, not necessarily uniformed or armed with a firearm, who provides protection for a plant and the special nuclear material therein in the course of performing other duties.

(e) "Continuous visual surveillance" means unobstructed view at all times of a shipment of special nuclear material, and of all access to a temporary storage area or cargo compartment containing the shipment.

(f) "Physical barrier" means

(1) Fences constructed of No. 11 American wire gauge, or heavier wire fabric, topped by three strands or more of barbed wire or similar material on brackets angled outward between 30° and 45° from the vertical, with an overall height of not less than eight feet, including the barbed topping;

(2) Building walls, ceilings and floors constructed of stone, brick, cinder block, concrete, steel or comparable materials (openings in which are secured by grates, doors, or covers of construction and fastening of sufficient strength such that the integrity of the wall is not lessened by any opening), or walls of similar construction, not part of a building, provided with a barbed topping described in paragraph (f)(1) of this section of a height of not less than 8 feet; or

(3) Any other physical obstruction constructed in a manner and of materials suitable for the purpose for which the obstruction is intended.

(g) "Protected area" means an area encompassed by physical barriers and to which access is controlled.

(h) "Vital area" means any area which contains vital equipment.

(i) "Vital equipment" means any equipment, system, device, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation. Equipment or systems which would be required to function to protect public health and safety following such failure, destruction, or release are also considered to be vital.

(j) "Material access area" means any location which contains special nuclear material, within a vault or a building, the roof, walls, and floor of which each constitute a physical barrier.

(k) "Isolation zone" means any area adjacent to a physical barrier, clear of all objects which could conceal or shield an individual.

(l) "Intrusion alarm" means a tamper indicating electrical, electromechanical, electrooptical, electronic or similar device which will detect intrusion by an individual into a building, protected area, vital area, or material access area, and alert guards or watchmen by means of actuated visible and audible signals.

(m) "Lock" in the case of vaults or vault type rooms means a three-position, manipulation resistant, dial type, built-in combination lock or combination padlock and in the case of fences, walls, and buildings means an integral door lock or padlock which provides protection equivalent to a six-tumbler cylinder lock. "Lock" in the case of a vault or vault type room also means any manipulation resistant, electromechanical device which provides the same function as a built-in combination lock or combination padlock, which can be operated remotely or by the "reading" or insertion of information, which can be uniquely characterized, and which allows operation of the device. "Locked" means protected by an operable lock.

(n) "Vault" means a windowless enclosure with walls, floor, roof and door(s) designed and constructed to delay penetration from forced entry.

(o) "Vault-type room" means a room with one or more doors, all capable of being locked, protected by an intrusion alarm which creates an alarm upon the entry of a person anywhere into the room and upon exit from the room or upon movement of an individual within the room.

(p) "Radiological sabotage" means any deliberate act directed against a plant or transport in which an activity licensed pursuant to the regulations in this chapter is conducted, or against a component of such a plant or transport which could directly or indirectly endanger the public health and safety by exposure to radiation.

(q) "DOE" and "Department of Energy" means the Department of Energy established by the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565, 42 U.S.C. 7101 *et seq.*), to the extent that the Department, or its duly authorized representatives, exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers and components and transferred to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104(b), (c) and (d) of the Energy Reorganization Act of 1974 (Pub. L. 93-438, 88 Stat. 1233 at 1237, 42 U.S.C. 5814) and retransferred to the Secretary of Energy

## PART 150 • PROPOSED RULE MAKING

Accordingly, concurrent with adoption in final form of the proposed amendments of 10 CFR Part 20, the following amendment to 10 CFR Part 150 would be made.

Pursuant to the Atomic Energy Act of 1954, as amended, and section 553 of Title 5 of the United States Code, notice is hereby given that adoption of the following amendment of 10 CFR Part 150 is contemplated. All interested persons who desire to submit written comments or suggestions for consideration in connection with the proposed amendment should send them to the Secretary of the Commission, U.S. Atomic Energy Commission, Washington, D.C. 20545, Attention: Dockets and Service Section, by November 11, 1974. Copies of comments on the proposed amendments may be examined at the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C.

Paragraph 150.15 (a) is amended to add a new subparagraph (7) to read as follows:

### § 150.15 Persons not exempt.

(a) . . . . .

(7) The disposal of transuranium elements (atomic number greater than 92) by burial.

42 FR 13837  
Published 3/14/77  
Comment Period expires 5/13/77

### [ 10 CFR Part 150 ]

#### PLUTONIUM-238 POWERED CARDIAC PACEMAKERS

##### Exemptions and Continued Regulatory Authority in Agreement States

The U.S. Nuclear Regulatory Commission is considering an amendment to its regulations in 10 CFR Part 150, "Exemptions and Continued Regulatory Authority in Agreement States Under section 274" (of the Atomic Energy Act of 1954, as amended), which would make the Commission the sole agency regulating the routine use under general license of plutonium-238 powered cardiac pacemakers and the distribution under specific license of pacemakers used under such general license.

Section 274 of the Atomic Energy Act of 1954, as amended, and § 150.15 of 10 CFR Part 150 state that persons in Agreement States are not exempt from the Commission's licensing and regulatory requirements with respect to the disposal of such byproduct, source, or special nuclear material as the Commission determines by regulation or order should, because of the hazards or potential hazards thereof, not be disposed of without a license from the Commission. Section 274 and § 150.15 further provide that within Agreement States the Commission may by rule, regulation, or order require that the manufacturer, processor or producer of any product containing byproduct, source, or special nuclear material shall not transfer pos-

session or control of such product except pursuant to a license issued by the Commission.

The Commission is publishing concurrently with this notice proposed amendments of 10 CFR Part 70 that would establish (a) a general license to hospitals for implantation of plutonium-238 powered cardiac pacemakers approved by the Commission for routine use, (b) a general license to patients to use such pacemakers, (c) a general license to persons possessing such pacemakers incidental to recovery and disposal, and (d) requirements for issuance of specific licenses authorizing distribution of pacemakers for possession and use under the general licenses. The pacemakers would be manufactured to rigid safety specifications which make it highly unlikely that the plutonium contained in the pacemakers would be released to the environment. However, in order to further assure that there would be little or no potential hazard to the public health and safety or to the environment resulting from the wide-scale distribution of pacemakers, the patient (a general licensee of the Commission) would be required to register with the Commission and to return the pacemaker to the distributor or manufacturer (a specific licensee of the Commission) for controlled storage and disposal or reuse when it is no longer of use to the patient.

An alternative to regulation of the routine distribution and use of the pacemakers exclusively by the Commission would be regulation of distributors and users by each of the Agreement States and the Commission. This alternative would provide less assurance of recovery since the users could be expected to move from State to State; further, the problems of accounting for the pacemakers could be compounded if many agencies were involved.

The Commission is considering a determination that, because of the potential hazards associated with disposal of large numbers of plutonium-238 powered cardiac pacemakers under routine use, they should not be disposed of without a license from the Commission. In implementing this determination the Commission would assert its authority in Agreement States over routine implantation, use and recovery of such pacemakers under general license and over the specifically licensed distribution of pacemakers used under the general license. The Commission's exercise of authority in the Agreement States together with its exercise of authority in non-Agreement States would result in only the Commission regulating the distribution, implantation, and recovery of pacemakers used under the general license. The proposed amendment to § 150.15 of Part 150 which follows would reflect the proposed determination. The proposed amendment would not affect an Agreement State's authority to license the use of nuclear powered cardiac pacemakers in investigational programs or to regulate radiation safety at installations at which such pacemakers are manufactured or distributed.

Accordingly, concurrent with adoption in final form of the proposed amendments of 10 CFR Part 70, the amend-

ment of 10 CFR Part 150 which follows would be promulgated.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of Title 5 of the United States Code, notice is hereby given that adoption of the following amendment to 10 CFR Part 150 is contemplated. All interested persons who desire to submit written comments or suggestions for consideration in connection with the proposed amendment should send them by May 13, 1977, to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Attention: Docketing and Service Branch. Copies of comments on the proposed amendment may be examined at the Commission's Public Document Room at 1717 H Street NW., Washington, D.C.

New paragraphs (a)(8) and (a)(9) are added to § 150.15 to read as follows:

### § 150.15 Persons not exempt.

(a) Persons in Agreement States are not exempt from the Commission's licensing and regulatory requirements with respect to the following activities:

(8) The transfer of possession or control by the manufacturer or distributor of cardiac pacemakers containing plutonium-238 and intended for routine use under the general license in § 70.19 of this chapter.

(9) The possession, use and disposal of plutonium-238 powered cardiac pacemakers under the general licenses in §§ 70.18, 70.19 and 70.20 of this chapter.

43 FR 22216  
Published 5/24/78  
Comment period expires 6/23/78

Special Nuclear Material of Moderate and Low Strategic Significance

See Part 73 Proposed Rule Making.

43 FR 22365  
Published 5/25/78  
Comment period expires 7/24/78  
(extended to 12/21/78)

Safeguards on Nuclear Material—Implementation of US/IAEA Agreement

See Part 75 Proposed Rule Making.

43 FR 25433  
Published 6/13/78  
Comment period expires 6/23/78

Special Nuclear Material of Moderate and Low Strategic Significance; Safeguard Requirements; Correction

See Part 73 Proposed Rule Making.

## PART 150 • PROPOSED RULE MAKING

43 FR 54255  
Published 11/21/78  
Comment period extended to 12/21/78

*Safeguards on Nuclear Material—Implementation  
of US/IAEA Agreement*

See Part 75 Proposed Rule Making.

45FR15184  
Published 3/10/80  
Comment period expires 5/9/80

*Protection of Employees  
Who Provide Information*

See Part 19  
Proposed Rule Making

➤ 45 FR 66473  
Published 10/7/80  
Withdrawn 10/1/80

### 10 CFR Part 150

#### **Withdrawal of Proposed Rulemaking on Routine Use of Plutonium-238 Powered Cardiac Pacemakers**

**AGENCY:** U.S. Nuclear Regulatory  
Commission.

**ACTION:** Withdrawal of proposed rule.

**SUMMARY:** The Nuclear Regulatory Commission is withdrawing its notice of proposed rulemaking on the routine use of plutonium-238 (a radioactive material) in cardiac pacemakers. In lieu of amending Part 150 to make the Commission the sole agency responsible for the routine use of plutonium-238 in cardiac pacemakers, authority for regulation of such use in Agreement States will be retained by the States.

**FOR FURTHER INFORMATION CONTACT:** Donovan A. Smith, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, telephone: 301-443-5946.

**SUPPLEMENTARY INFORMATION:** Notice is hereby given that the Nuclear Regulatory Commission is withdrawing its notice of rulemaking that proposed that the Commission be the sole agency regulating the routine use of plutonium-238 powered cardiac pacemakers. The proposed amendments were published in the Federal Register on March 14, 1977, at 42 FR 13837.

The Commission's decision to withdraw the proposed amendments results from technological advances in non-nuclear power sources for pacemakers. These advances have

contributed to the development of long-lived conventionally powered pacemakers that satisfy the 10-year design life objective that has been associated with the plutonium-238 powered pacemakers. The availability of the long-lived conventionally powered pacemakers, at a cost substantially less than the cost of the plutonium-238 pacemakers, has caused a reduction in the demand for the plutonium-238 pacemakers. Thus, there no longer appears to be a need for the proposed amendments that were designed to keep track of large numbers of plutonium-238 pacemakers so that significant numbers would not escape recovery for controlled disposal.

The Commission is publishing, concurrently with this notice, withdrawal of its notice of proposed amendment of 10 CFR Part 70 that would have established general licenses for the implantation, routine use and recovery of plutonium-238 powered cardiac pacemakers.



## POLICY STATEMENTS

45 FR 66754

Published 10/7/80

Comment period expires 12/31/80

### Proposed General Statement of Policy and Procedure for Enforcement Actions

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Proposed general statement of policy.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) has under consideration the following staff-proposed policy statement on enforcement policies and procedures. This proposed policy statement is intended to inform licensees and the public of the bases for taking various enforcement actions. It is intended that this policy, as finally adopted, be codified as Appendix C to Part 2 of Title 10 of the Code of Federal Regulations. Pending final adoption of the policy, the Proposed General Statement of Policy will be used as guidance to the NRC staff in taking enforcement actions.

**DATE:** Comments are due on or before December 31, 1980.

**ADDRESSES:** Send comments and suggestions to: Secretary of the Commission, U.D. Nuclear Regulatory Commission, Washington, D.C. 20555, attention: Docketing and Service Branch. Copies of comments may be examined in the U.S. Nuclear Regulatory Commission Public Document Room, 1717 H Street, N.W., Washington, D.C.

**FOR FURTHER INFORMATION CONTACT:** Dudley Thompson, Executive Officer for Operations Support, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (301-492-8487).

**SUPPLEMENTARY INFORMATION:** The criteria used by the Commission's staff to determine enforcement action and categories of noncompliance (referred to herefrom as "Criteria") were first published on October 17, 1972 (37 FR 21962). These Criteria were subsequently modified on January 3, 1975 (40 FR 820) and on December 3, 1979 (44 FR 77135). Since late 1979, the Commission has been considering the publication of a comprehensive statement of enforcement policy. Added urgency for the development of such a policy statement has arisen from the pendency, and now the enactment and approval of Pub. L. 96-295 (approved June 30, 1980), that, among other things, amended section 234 of the Atomic Energy Act to raise the maximum civil penalty from \$5,000 to \$100,000 and

eliminated the provision limiting the total civil penalties payable in any 30-day period to \$25,000.

The proposed statement of general policy set out below (Appendix C to Part 2) explains how the Commission will utilize its various enforcement authorities. The Commission is particularly interested in comments on the use of Table 2 (see Section IV, F).

### Appendix C—General Policy and Procedure for NRC Enforcement Actions

The following statement of general policy and procedure explains the policies and procedures to be followed by the U.S. Nuclear Regulatory Commission and its staff in initiating enforcement actions and by presiding officers, the Atomic Safety and Licensing Appeal Boards, and the Commission in reviewing these actions. This statement is applicable to enforcement in matters involving the public health and safety, the common defense and security, and the environment.<sup>1</sup>

#### I. Introduction and Purpose

The goals of the NRC's enforcement program are:

- to ensure "compliance with NRC regulations and license conditions";<sup>2</sup>
- to obtain "prompt correction of licensee weaknesses";<sup>3</sup>
- to deter "future noncompliance through strong enforcement measures";<sup>4</sup> and
- to encourage improvement of licensee performance, thus enhancing the degree of protection of public health and safety, common defense and security, and the environment.

To help achieve these goals, the enforcement program "will emphasize prompt and vigorous enforcement" when dealing with persons "who are unable or unwilling to comply with NRC requirements" and, in any case, will "assure that a licensee will not benefit by violating NRC regulations."<sup>5</sup> It is the Commission's intent that its enforcement program be marked by "an aggressive enforcement strategy that seeks more frequent use of stronger enforcement measures" and implementation that assures "that noncompliance is more expensive than compliance."<sup>6</sup> These policies are intended to assure that the necessary

"meticulous attention to detail"<sup>7</sup> and "high standard of compliance"<sup>8</sup> will be achieved. Furthermore, "licensees who cannot achieve and maintain adequate levels of protection will not be permitted to operate."<sup>9</sup>

#### II. Legal Framework

The Commission's enforcement jurisdiction is drawn essentially from the Atomic Energy Act of 1954, as amended (sections 161, 186, and 234) and the Energy Reorganization Act (sections 206 and 223).

Section 161 of the Atomic Energy Act authorizes NRC to conduct inspections and issue any orders that may be "necessary or desirable to promote the common defense and security or to protect health or to minimize danger to life or property." Section 186 authorizes NRC to revoke licenses under certain circumstances (e.g., for material false statements, in response to conditions that would have warranted refusal of a license on an original application, for a licensee's failure to build or operate a facility in accordance with the terms of the permit or license, and for violation of a Commission regulation). However, licensees must be given an opportunity to demonstrate or achieve compliance before a license may be revoked or suspended (except in cases of willfulness or those in which the public health, interest, or safety require otherwise). Section 234 authorizes NRC to impose civil penalties for the violation of certain specified licensing provisions of the Act, rules, orders, and license terms implementing these provisions, and violations for which licenses can be revoked.

The Atomic Energy Act (Chapter 18) also authorizes NRC to obtain injunctions in response to violations of the Act (or any regulation or order issued under the authority of the Act). In addition, the Act provides for varying levels of criminal penalties (i.e., monetary fines and imprisonment) for willful violations of—

- (1) Sections 57, 92, 101, and 108;
- (2) Any other section of the Act or any regulation or order prescribed or issued under section 65 or subsections 161b., 161i., or 161o.; and
- (3) The requirements set forth in the Act concerning the receipt, tampering, and disclosure of Restricted Data and trespass upon Commission installations.

Section 223 of the Atomic Energy Act also establishes criminal penalties

<sup>1</sup> Antitrust enforcement matters will be dealt with on a case-by-case basis.

<sup>2</sup> "Fiscal Years 1982-1986 Policy, Planning, and Program Guidance (PPPG)", at para II.A.3.B.

<sup>3</sup> *Id.*, at para II.B.2.i.

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*, at para II.A.3.b.

<sup>6</sup> *Id.*, at para II.B.2.i.

<sup>7</sup> *In the Matter of X-Ray Engineering Co.*, 1 AEC 553, 555 (1960).

<sup>8</sup> *In the Matter of Hamlin Testing Laboratories, Inc.*, 2 AEC 423, 426, (1964).

<sup>9</sup> PPPG, at para II.A.2.a.

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applicable to certain individuals of a firm constructing or supplying the components of any utilization facility licensed under section 103 or 104(b). Those individuals include any director, officer, or employee of such firms. Under the section, it would be a criminal offense if any of these individuals "by act or omission, in connection with such construction or supply, knowingly and willfully violates or causes to be violated, any section of this Act (i.e., the Atomic Energy Act of 1954, as amended) any rule, regulation, or order issued thereunder, or any license condition, which violation results, or if undetected could have resulted, in a significant impairment of a basic component of such a facility \* \* \*."

A "basic component" is defined in section 223 generally along the lines of the definition in 10 CFR Part 21. Part 21 implements section 206 of the Energy Reorganization Act of 1974. Section 206 of the Energy Reorganization Act authorizes NRC to impose a civil penalty in an amount equal to that authorized by section 234 of the Atomic Energy Act for certain failures to report known safety defects in licensed facilities or activities. Section 206 has an approach similar to section 223, but section 206 does not provide for criminal penalties and is not as limited in scope as is the language in section 223.<sup>10</sup>

All alleged or suspected criminal violations of the Atomic Energy Act are investigated by the Federal Bureau of Investigation of the Department of Justice.

The Commission has implemented the enforcement provisions of the Atomic Energy Act and the Energy Reorganization Act by regulations set forth in 10 CFR Part 2 (§§ 2.201, 2.202, 2.204, and 2.205) and in 10 CFR Part 21. 10 CFR 2.201 governs the issuance of notices of violation. Sections 2.202 and 2.204 of Title 10 set forth procedures for, respectively,

- (1) orders to show cause why licenses should not be amended, suspended, or revoked or why such other action as may be proper should not be taken, and
- (2) orders modifying licenses.

Immediately effective ordering actions must be based on a finding that the public health, interest, or safety requires such actions, or that the basis for the action was a willful violation.

Section 2.205 sets forth procedures for assessing civil penalties.

Corrective enforcement actions may be taken in the absence of any violation

of NRC requirements; for example, when a safety problem not previously covered by a requirement is discovered. NRC imposes civil penalties, however, only on the basis of a violation of an existing requirement.

### III. Severity of Violations

Regulatory requirements have varying degrees of safety, safeguards, or environmental significance. This policy statement categorizes all violations in terms of six levels of severity to show their relative importance. Severity Level I has been assigned to violations that are the most significant; Severity Level VI violations are the least significant.

Severity Levels I, II, and III comprise violations that are of significant regulatory concern. In general, violations that are included in these severity categories involve actual or high potential impact on the public. Severity Level IV violations include degradation of engineered systems or management control systems designed to assure proper plant construction or to detect, prevent, or mitigate an event. Although Severity Level IV violations in themselves are not cause for significant concern, they are the sort of violations that, if left uncorrected, could lead to matters of significant concern. Severity Level V covers other less serious violations that are of other than minor concern. Severity Level VI defines violations that are of minor concern.

Because of the considerable differences in the types of activities regulated by the NRC, violations of regulatory requirements have been scaled according to their relative importance within each of the following seven areas:

- (1) Reactor Operations (Supplement I),
- (2) Facility Construction (Supplement II),
- (3) Safeguards (Supplement III),
- (4) Health Physics 10 CFR 20 (Supplement IV),
- (5) Transportation (Supplement V),
- (6) Fuel Cycle Operations (Supplement VI), and
- (7) Materials Operations (Supplement VII).

Detailed guidance is provided in Supplements I-VII for determining the appropriate severity level for violations in each of these seven areas of licensed activities. Violations not specifically identified by a severity level will be placed at the level best suited to the significance of the particular matter. Similarly, licensed activities not directly covered by one of the above listed seven areas; e.g., export license activities; will be placed in the activity area most suitable in light of the particular violation involved.

The NRC expects licensees and applicants to provide full, complete, timely, and accurate information and reports. Accordingly, unless otherwise categorized in the Supplements, the severity level of a violation involving the failure to make a required report to the NRC will be based upon the significance of and the circumstances surrounding the matter not reported. The severity level assigned to material false statements may be Severity Level I, II or III, depending on the circumstances surrounding the statement. Similarly, failure to make a required Part 21 report may be assigned Severity Level I, II or III.

### IV. Enforcement Actions

This section describes the enforcement sanctions available to NRC and specifies the conditions under which each is to be used. The basic sanctions are notices of violation, civil penalties, orders of various types, and the less formal enforcement mechanisms such as bulletins and immediate action letters.

#### A. Notice of Violation

A *Notice of Violation* is a written notice setting forth one or more violations of a legally binding requirement. The notice requires the licensee to provide a written statement, normally under oath, describing corrective actions taken (or planned), the results achieved, the date when full compliance will be achieved, and corrective action to prevent recurrence.

NRC uses the notice of violation as the standard method for formally recording the existence of a violation. The notice may be the only enforcement action taken or it may be used as a basis for other enforcement actions, such as civil penalties and orders. Because the Commission wants to "encourage and support licensee initiative for self-identification and correction of problems,"<sup>11</sup> NRC will not generally issue notices of violation for a violation that meets all of the four following tests:

- (1) It was identified by the licensee,
- (2) It fits in Severity Level V or VI,
- (3) It was reported, if required, and
- (4) It was or will be corrected within a reasonable time.

Licensees are not ordinarily cited for violations resulting from matters not within the control of the licensee, including its employees, that could not have been reasonably foreseen, such as, equipment failures that are not the result of personnel error or inadequate design, procedures, quality assurance,

<sup>10</sup> The preceding descriptions are summaries of the basic enforcement provisions of the statutes; where important, the actual words of the statutes should be consulted.

<sup>11</sup> "FY 8286 Policy, Planning, and Program Guidance," para II.B.2.a.

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fabrication, testing, maintenance, or communications.

A notice of violation may be issued to a licensed operator when a failure to comply with an operator's license contributes directly to violations of Severity Levels I, II, or III. In general, whenever a licensed operator is issued a notice of violation, the facility licensee also receives a notice of violation. For egregious single violations by licensed operators, or recurring operator involvement in Severity Level I, II, or III violations, suspension or revocation of the operator's license will be considered.

### B. Civil Penalty

A *Civil Penalty* is a monetary penalty for violation of (a) certain specified licensing provisions of the Atomic Energy Act or supplementary Commission rules or orders, (b) any requirement for which a license may be revoked, or (c) reporting requirements under section 206 of the Energy Reorganization Act.

Civil penalties are generally imposed in the following situations:<sup>12</sup>

(1) Severity Level I, II, or III violations have occurred;

(2) Severity Level IV and V violations have occurred that are similar to violations discussed in a previous enforcement conference, and for which the enforcement conference was ineffective in achieving the required corrective action;<sup>13</sup>

(3) There are knowing and conscious<sup>14</sup> violations of the reporting requirements of section 206 of the Energy Reorganization Act; or

(4) Willful violations of requirements have occurred.<sup>15</sup>

In determining the amount of a civil penalty to be applied, the Commission believes the gravity of the violation involved (i.e., severity level) is of paramount concern. However, when making this determination, NRC also considers the duration of the

noncompliance, how the problem was identified, the financial impact on the licensee of a given penalty, the good faith of the licensee, the licensee's prior enforcement history and whether the violation was willful.<sup>16</sup>

NRC imposes different levels of penalties on different classes of licensees. The base values of civil penalties ordinarily imposed are set

forth in Table 1. These distinctions are made primarily on the basis of potential public consequences. Licensee classes toward the top of the table are penalized more heavily because their operations generally involve greater nuclear material inventories and greater potential consequences to the health and safety of the public as well as licensee employees.

Table 1.—Base Civil Penalties

| Types of licensees                                                                                   | Severity levels of violations |          |          |          |         |
|------------------------------------------------------------------------------------------------------|-------------------------------|----------|----------|----------|---------|
|                                                                                                      | I                             | II       | III      | IV       | V       |
| Power reactors (Other SNM licensees associated with Category I material for safeguard purposes only) | \$80,000                      | \$80,000 | \$40,000 | \$15,000 | \$5,000 |
| Test reactors (Fuel facilities. Other SNM licensees for safeguard purposes only)                     | 40,000                        | 40,000   | 20,000   | 7,500    | 2,500   |
| Research reactors (Critical facilities)                                                              | 16,000                        | 16,000   | 8,000    | 3,000    | 1,000   |
| All other licensees and persons subject to civil penalties                                           | 8,000                         | 8,000    | 4,000    | 1,500    | 500     |

A secondary factor considered in Table 1 is the ability of various classes of licensees to pay the civil penalties. It is not the Commission's intention that the economic impact of a civil penalty be such that it puts a licensee out of business or adversely affects a licensee's ability to safely conduct licensed activities. The deterrent effect of NRC penalties is best served when the amounts of such penalties take into account a licensee's "ability to pay." As a general rule, the licensee classes toward the top of Table 1 represent larger firms, whereas those toward the bottom tend to be smaller. When determining the amounts of civil penalties for licensees for whom the table does not accurately reflect the ability to pay, NRC will consider necessary increases or decreases on a case-by-case basis.

The dollar values shown in Table 1 are those normally imposed for violations at the severity levels and for the types of licensees indicated. Because the NRC considers the potential for an event to be of similar seriousness as the occurrence of the event itself, the civil penalty amounts for Severity Level I and II violations are intentionally the same. However, in addition to civil penalties, an Order is generally issued for Severity Level I violations.

If, prior to NRC discovery, a licensee identifies, corrects, and (where required) reports a violation in a timely fashion, the civil penalty will be reduced by as much as 50 percent of the amounts shown in Table 1. This policy will

provide an incentive to licensees to find and correct problems on their own.

Civil penalties may be increased as much as 25 percent of the amounts shown in Table 1 if the licensee could reasonably have been expected to have taken effective preventive measures. For example, cases in which a licensee had knowledge of a problem as a result of a prior NRC inspection or licensee audit, or issuance of an order, bulletin, circular, information notice, generic letter, notice of violation, or other means, and still failed to comply despite such prior warning, the additive factor will apply. Particularly egregious cases, including cases involving willfulness, may result in penalties up to the statutory maximum. On the other hand, for those cases in which the NRC concludes that the licensee deserves special mitigation for "good faith," a civil penalty may be reduced by as much as 25 percent of the adjusted values resulting from reductions, if any, for special mitigation based on "self identification".

The "good faith" reduction will only be applied if, in addition to meeting the requirements for the 50 percent reduction, the licensee has taken extraordinarily prompt and comprehensive corrective action.

In the case of violations at Severity Levels I, II, or III, the amounts shown in Table 1 may be imposed for each violation. However, to emphasize the focus on the specific event(s) or problem(s) of concern, the cumulative total for all violations related to a specific event or problem will generally

<sup>12</sup> Orders may be issued in lieu of, or in addition to, civil penalties for these same situations.

<sup>13</sup> In applying this guidance, NRC normally considers civil penalties only for violations that occur from the date of the last inspection or within two years, whichever is greater. NRC also considers the licensee's success in dealing with previously identified concerns. Enforcement conferences are normally conducted for all Severity Level I, II, and III violations as well as for Severity Level IV and V violations that are considered programmatic (rather than isolated) concerns.

<sup>14</sup> The knowing and conscious standard is established by section 206(b) of the Energy Reorganization Act.

<sup>15</sup> Willful violations include those involving careless disregard of requirements.

<sup>16</sup> These factors are derived from the Conference Report on the FY 80 NRC Authorization Bill.



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be the amount shown in Table 1.<sup>17</sup> If the violations involve more than one specific event or problem, civil penalties may be assessed for each specific event or problem. The failure to make a required report of an event or problem is considered as a separate event.

A greater civil penalty is imposed if a violation continues for more than one day. Each of such violation may constitute a separate violation for the purpose of computing the applicable civil penalty. A continuing Severity III, IV or V violation which exceeds the maximum civil penalty for a single violation of the next higher severity level must be approved by the Commission, e.g., a continuing Severity Level III violation for a reactor exceeding \$100,000 must be approved by the Commission. A continuing Severity Level I or II violation which exceeds three times the maximum civil penalty for a single Severity I violation, i.e., \$300,000, must be approved by the Commission. Civil penalties in excess of the limits for each type of license will require specific Commission approval in accordance with guidance set forth in section V below.

### C. Orders

An Order is a written NRC directive to modify, suspend, or revoke a license; to cease and desist from a given practice or activity; or to take such other action as may be proper (see 10 CFR 2.202 and 2.204).

(1) *License Modification Orders* are issued when some change in the conduct of a licensed activity is necessary. These orders are made effective immediately, without prior opportunity for hearing, whenever it is determined that the public health, interest, or safety so requires, or when the order is responding to a violation involving willfulness. Otherwise, a prior opportunity for a hearing on the modification is afforded. For cases in which the NRC believes a basis could reasonably exist for not modifying the license as proposed, the licensee will ordinarily be afforded an opportunity to show cause why the license should not be modified in the proposed manner.

(2) *Suspension Orders* may be used:

(a) To remove a threat to the public health and safety, common defense and security, or the environment;

<sup>17</sup> All violations associated with a particular event or problem will be categorized at the same severity level, even though similar violations, if not associated with the event, might otherwise have been categorized at a lower severity level (e.g., the failure to post a radiation warning sign, which would normally be a Severity Level IV violation, would be categorized as a Severity Level II violation if it contributed to an actual overexposure exceeding 5 rema).

(b) To stop facility construction when (i) further work could preclude or significantly hinder the identification and correction of an improperly constructed safety related system or component, or (ii) the licensee's quality assurance program implementation is not adequate and effective to provide confidence that construction activities are being properly carried out;

(c) When the licensee has not responded adequately to other enforcement action;

(d) When the licensee interferes with the conduct of an inspection or investigation; or

(e) For any reason not mentioned above for which license revocation is legally authorized.

Suspensions may apply to all or part of the licensed activity. Ordinarily, a licensed activity is not suspended (nor is a suspension prolonged) for failure to comply with requirements where such failure is not willful and adequate correction action has been taken.

The policies governing immediately effective suspension orders and orders to show cause are the same as those previously described above for license modification orders.

(3) *Revocation Orders* may be used:

(a) When a licensee is unable or unwilling to comply with NRC requirements,

(b) When a licensee refuses to correct a violation,

(c) When a licensee does not respond to a notice of violation,

(d) When a licensee does not pay a fee required by 10 CFR Part 170, or

(e) For any other reason for revoking a license under section 186 of the Atomic Energy Act (e.g., any condition which would warrant refusal of a license on an original application).

(4) *Cease and Desist Orders* are typically used to stop an unauthorized activity that has continued despite notification by NRC that such activity is unauthorized.

### D. Other Enforcement Actions

In addition to the formal enforcement mechanisms of notice of violations, civil penalties, and orders, NRC also uses informal mechanisms, such as enforcement conferences, bulletins, circulars, information notices, generic letters, notices of deviation, and immediate action letters as part of its enforcement and regulatory programs. NRC expects licensees to adhere scrupulously to any informal obligations and commitments resulting from these processes and will not hesitate to issue appropriate orders to make sure that expectation is realized.

(1) *Enforcement Conferences* are meetings held by NRC with licensee management to discuss safety, safeguards or environmental problems, licensee compliance with regulatory requirements, a licensee's proposed corrective measures (including schedules for implementation), and enforcement options available to the NRC.

(2) *Bulletins, Circulars, Information Notices and Generic Letters* are written notifications to groups of licensees identifying specific problems and calling for or recommending specific actions on their part. Responses to these notifications may be required to be under oath or affirmation.

(3) *Notices of Deviation* are written notices describing a licensee's or a vendor's failure to satisfy an informal commitment or failure to conform to the provisions of applicable codes, standards, guides, or accepted industry practices. The commitment, code, standard, practice or guide involved has not made a legally binding requirement, but it is a type of activity that a class of licensees has been encouraged to follow. The notice of deviation requests the licensee or vendor to provide a written explanation or statement describing corrective steps taken, the results achieved (or corrective steps that are planned), and the date when corrective action will be completed.

(4) *Immediate Action Letters (IALs)* are letters confirming a licensee's agreement to take certain actions to remove concerns about health and safety, safeguards, or the environment.

### E. Referrals to Department of Justice

Alleged or suspected criminal violations of the Atomic Energy Act (and of other relevant Federal laws) are referred to the Department of Justice for investigation and consideration of possible prosecution. Referral to the Department of Justice does not preclude the NRC from taking other enforcement action under this General Statement of Policy. However, such actions will be coordinated with the Department of Justice to the extent practicable.

### F. Escalation of Enforcement Sanctions

NRC considers violations of Severity Levels I, II, or III to be very serious. If repetitive serious violations occur, NRC will consider issuing orders in conjunction with civil penalties to achieve immediate corrective actions and to deter further recurrence of serious violations. NRC carefully considers the circumstances of each case in selecting and applying the sanction(s) appropriate to the case in



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accordance with the criteria described in sections IV.B and IV.C, above.

Examples of enforcement actions that (could) (will normally) be taken for Severity Level I, II, or III violations are set forth in Table 2.\* The actual progression to be used in a particular case will depend on the circumstances.

**Table 2.—Examples of Progression of Escalated Enforcement Actions for Violations in the Same Activity Area Under the Same License**

| Severity of violation | Number of similar violations from the date of the last inspection or within the previous 2 years (whichever is greater) |           |           |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------|-----------|-----------|
|                       | 1st                                                                                                                     | 2d        | 3d        |
| I.....                | a + b                                                                                                                   | a + b + c | d         |
| II.....               | a                                                                                                                       | a + b     | a + b + c |
| III.....              | a                                                                                                                       | a         | a + b     |

a = Civil penalty.  
b = Suspension of affected operations until the Office Director is satisfied that there is reasonable assurance that the licensee can operate in compliance with the applicable requirements, or modification of the license, as appropriate.  
c = Show cause for modification or revocation of the license, as appropriate.  
d = Further action, as appropriate.

Normally the progression of enforcement actions for repetitive violations will be based on violations under a single license. When more than one facility is covered by a single license, the normal progression will be based on repetitive violations at an individual facility and not on repetitive violations under the same license. However, it should be noted that under some circumstances; e.g., where there is common control over some facet of facility operations; repetitive violations may be charged even though the second violation occurred at a different facility and/or under a different license. For example, a physical security violation at Unit 2 of a dual unit plant that repeats an earlier violation at Unit 1 might be considered repetitive.

### V. Responsibilities

The Director, Office of Inspection and Enforcement, as the principal enforcement officer of the Commission, has been delegated the authority to issue notices of violations, civil penalties, and orders.<sup>18</sup> The Director

exercises judgment and discretion in determining the severity level of the violations and the appropriate enforcement sanctions, including the decision to impose a civil penalty and the amount of such penalty, consistent with the general principles of this statement of policy and the technical merits of the case.

The Commission will be provided written notification of all enforcement actions involving civil penalties or orders. The Commission will be consulted prior to taking enforcement action in the following situations (unless the urgency of the situation dictates immediate action):

(1) An action affecting facility operations that requires balancing the public health and safety and common defense and security implications of not operating the facility with the potential radiological or other hazards associated with facility operation;<sup>19</sup>

(2) Proposals to impose civil penalties in amounts greater than the maximum values set forth in section IV.B;

(3) Any proposed enforcement action which the Commission asks to be consulted on; or

(4) Any action an Office Director believes warrants Commission involvement.

### Supplement I.—Severity Categories

#### Reactor Operations

A. Severity I—Violations involving:

1. A Safety Limit, as defined in the Technical Specifications, being exceeded;

2. A system designed to prevent or mitigate a serious safety event not being able to perform its intended safety function when actually called upon to work;

3. An accidental criticality; or

4. Release of radioactivity offsite greater than ten (10) times the Technical Specification limit.\*

B. Severity II—Violations involving:

1. A system designed to prevent or mitigate serious safety events not being able to perform its intended safety function;

2. Release of radioactivity offsite greater than five (5) times the Technical Specification limit.\*

C. Severity III—Violations involving:

1. A Technical Specification Limiting Condition for Operation being exceeded where the appropriate Action Statement was not satisfied;

2. A system designed to prevent or mitigate a serious safety event not being

able to perform its intended function under certain conditions (such as not operable unless offsite power is available);

3. Release of radioactivity offsite greater than the Technical Specification limit\*<sup>20</sup>; or

4. Violation of 10 CFR 50.59 such that an amendment was not sought.

D. Severity IV—Violations involving:

1. Inadequate review or the failure to make a review in accordance with 10 CFR 50.59 or 10 CFR 21, that does not result in a severity level I, II, or III violation;

2. Any license limit, not covered by Severity Levels I, II, or III, being exceeded;

3. Failure to meet requirements not covered in Severity Levels I, II, or III, that measurably degrades the safety of operations, incident response, or the environment; or

4. Failure to make a required Licensee Event Report when the reported matter itself does not constitute a violation.

E. Severity V—Other violations, such as failure to follow procedures, that have other than minor safety or environmental significance.

F. Severity VI—Violations that have minor safety or environmental significance.

### Supplement II.—Severity Categories

#### Facility Construction

A. Severity I—Violations involving all or part of a structure or system that is completed in such a manner that it would not have satisfied its intended safety related purpose.

B. Severity II—Violations involving:

1. A significant deficiency in quality assurance program implementation related to more than one work activity (e.g., structural, piping, electrical, foundations), as shown by multiple program implementation violations that were not identified and corrected until after installation (i.e., completion) and inspection by the quality assurance/quality control check points that are relied upon to identify such violations; or

2. All or part of a structure or system that is completed in such a manner that it could have an adverse affect on the safety of operations.

C. Severity III—Violations involving:

1. Lack of quality assurance program implementation related to a single work activity (e.g., structural, piping, electrical, or foundations) as shown by multiple program implementation violations that were not identified and corrected by more than one quality assurance/quality control checkpoint relied upon to identify such violations;

\* As indicated in the Supplemental Information Section of the Federal Register Notice the Commission is interested in comments concerning the policy for the use of Table 2.

<sup>18</sup> The Directors of the Offices of Nuclear Reactor Regulation and Nuclear Materials Safety and Safeguards have also been delegated similar authority, but it is expected that normal use of this authority by NRR and NMSS will be confined to actions necessary in the interest of the public health and safety but not to those involving a violation of any existing requirement. Similarly, it is expected that IE will normally confine use of its authority to actions based on violations of existing requirements. The Director, Office of Administration, has been delegated the authority to issue orders where licensees violate Commission regulations by nonpayment of license fees.

<sup>19</sup> "FY 8286 Policy, Planning, and Program Guidance," para II.A.2.d.

<sup>20</sup> This does not apply to instantaneous release limit.

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2. Preoperational test program implementation in which the violations result in failing to confirm the design safety requirements of the structure or system; or

3. Failure to make a required 10 CFR 50.55(e) report.

D. Severity IV—Violations involving:

1. Failure to follow one or more Quality Assurance Criteria not amounting to Severity Level I, II, or III violations; or

2. Inadequate review or the failure to make a review in accordance with 10 CFR Part 21.

E. Severity V—Other violations, such as failure to follow procedures, that have other than minor safety or environmental significance.

F. Severity VI—Violations that have minor safety or environmental significance.

### Supplement III.—Severity Categories *Safeguards\**

A. Severity I—Violations involving:

1. Actual entry of an unauthorized individual into a vital area or material access area from outside the protected area that was undetected at the time of entry;

2. Actual theft, loss, or diversion of special nuclear material (SNM) or an act of radiological sabotage; or

3. Failure to promptly report an actual or attempted theft or diversion of SNM or an act of radiological sabotage.

B. Severity II—Violations involving:

1. Breakdown of security systems designed or used to prevent any unauthorized individual from entering a vital area or material access area from outside the protected area such that access could have been gained without detection;

2. Failure to operate the central (or secondary) alarm station;

3. Failure to respond to unauthorized or unanticipated security alarm annunciations;

4. Failure to establish or maintain safeguards systems designed or employed to prevent or detect the unauthorized removal of Category I SNM from areas of authorized use or storage; or

5. Breakdown of transportation security systems designed or employed to prevent the theft, loss, or diversion of SNM or acts of radiological sabotage.

C. Severity III—Violations involving:

\*Some transportation requirements are applied to more than one licensee involved in the same activity such as a shipper (10 CFR 73.20) and a carrier (10 CFR 70.20a). When a violation of such a requirement occurs, enforcement action will be directed against the responsible licensee which under the circumstances of the case may be one or more of the licensees involved.

1. Failure to provide protection or control of access into the protected area;

2. Failure to provide protection or control of access to a vital area or material access area;

3. Failure to provide protection or control of access to the transport vehicle or the SNM being transported; or

4. Failure to establish or maintain safeguards systems designed or used to detect the unauthorized removal of Category II SNM from areas of authorized use or storage.

D. Severity IV—Violations involving:

1. Failure to establish or maintain safeguards systems designed or employed to detect the unauthorized removal of Category III SNM from areas of authorized use or storage;

2. Failure of the security organization to follow procedures to cope with actual security incidents that are not covered by Severity Levels I, II, or III;

3. Failure of corporate or site security management to provide adequate direction or supervision of the security program that do not result in Severity Level I, II, or III violations; or

4. Inadequate review or the failure to make a review in accordance with 10 CFR Part 21.

E. Severity V—Other violations, such as failure to follow procedures or an approved security plan, that have other than minor safeguards significance.

F. Severity VI—Violations that have minor safeguards significance.

### Supplement IV.—Severity Categories *Health Physics 10 CFR Part 20*

A. Severity I—Violations involving:

1. Exposure of a worker in excess of 25 rems of radiation to the whole body, 150 rems to the skin of the whole body, or 375 rems to the feet, ankles, hands, or forearms;

2. Exposure of a member of the public in excess of 0.5 rems of radiation;

3. Release of radioactive material to an unrestricted area in excess of 10 times the limits of 10 CFR 20.106;

4. A radiation level in an unrestricted area that exceeds 100 millirem/hour for a one-hour period;

5. Disposal of licensed material in quantities or concentrations in excess of 10 times the limits of 10 CFR 20.303 or 20.304; or

6. Exposure of a worker in restricted areas in excess of 10 times the limits of 10 CFR 20.103.

B. Severity II—Violations involving:

1. Exposure of a worker in excess of 5 rems of radiation to the whole body, 30 rems to the skin of the whole body, or 75 rems to the feet, ankles, hands, or forearms;

2. Exposure of a member of the public in excess of 0.1 rems of radiation;

3. Release of radioactive material to an unrestricted area in excess of 5 times the limits of 10 CFR 20.106;

4. Failure to make an immediate notification as required by 10 CFR 20.403(a)(i) and 10 CFR 20.403(a)(2);

5. A radiation level in an unrestricted area that exceeds 50 millirem/hour for a one hour period;

6. Disposal of licensed material in quantities or concentrations in excess of 5 times the limits of 10 CFR 20.303 or 20.304; or

7. Exposure of a worker in restricted areas in excess of 5 times the limits of 10 CFR 20.103.

C. Severity III—Violations involving:

1. Exposure of a worker to levels in excess of those specified in 10 CFR 20.101 or 20.104;

2. A radiation level in an unrestricted area that exceeds 5 millirem/hour for a one hour period;

3. Failure to make a 24-hour notification as required by 10 CFR 20.403(b) or an immediate notification required by 10 CFR 20.402(a);

4. Substantial potential for an exposure or release in excess of 10 CFR 20 where such exposure or release does not occur (e.g., entry into high radiation area without having performed an adequate survey, operation of a radiation facility with a nonfunctioning interlock system);

5. Release of radioactive material to an unrestricted area in excess of the limits of 10 CFR 20.106;

6. Disposal of licensed material not covered in Severity Levels I or II;

7. Exposure of a worker in restricted areas in excess of the limits of 10 CFR 20.103; or

8. Release for unrestricted use of contaminated material or equipment substantially in excess of NRC or license limits or the failure to decontaminate plant areas as required.

D. Severity IV—Violations involving:

1. Failure to follow requirements (e.g., inadequate survey, incomplete dosimetry, improper posting), not covered in Severity Levels I, II, or III, that substantially reduces the margin of safety;

2. A radiation level in an unrestricted area such that an individual may receive greater than 2 millirem in a one hour period or 100 millirem in any seven consecutive days;

3. Failure to make a 30-day notification required by 10 CFR 20.405; or

4. Inadequate review or failure to make a review in accordance with 10 CFR Part 21.

E. Severity V—Violations involving:

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1. Failure to make a followup written report as required by 10 CFR 20.402(b), 20.408, and 20.409; or

2. Any other matter, including failure to follow procedures, that has other than minor safety or environmental significance.

F. Severity VI—Violations that have minor safety or environmental significance.

### Supplement V.—Severity Categories

#### Transportation

A. Severity I—Violations of NRC transportation requirements involving:

1. Radiation exposure of a member of the public in excess of 0.5 rems of radiation; or

2. Loss of package integrity resulting in surface contamination or external radiation levels in excess of ten (10) times the NRC or Department of Transportation (DOT) limits.

B. Severity II—Violations of NRC transportation requirements involving:

1. Loss of package integrity resulting in surface contamination or external radiation levels in excess of NRC or DOT requirements;

2. Surface contamination or external radiation levels in excess of three times NRC or DOT limits that did not result from a breach of package integrity; or

3. Failure to make required initial notifications associated with Severity Level I or II violations.

C. Severity III—Violations of NRC transportation requirements involving:

1. Breach of package integrity;

2. Surface contamination or external radiation levels in excess of, but less than a factor of three above NRC or DOT requirements, that did not result from a breach of package integrity;

3. Any noncompliance with labelling, placarding, shipping paper, packaging, loading, or other requirements that could reasonably result in the following:

a. Improper identification of the type, quantity, or form of material;

b. Failure of the carrier or recipient to exercise adequate controls; or

c. Substantial potential for personnel exposure or contamination; or

4. Failure to make required initial notification associated with Severity Level III violations.

D. Severity IV—Violations of NRC transportation requirements involving:

1. Any noncompliance involving package selection or preparation requirements which does not result in a breach of package integrity or surface contamination or external radiation levels in excess of NRC or DOT requirements.

2. Failure to follow procedures; or inadequate procedures, not covered in

Severity Level I, II, or III violations; that reduces the margin of safety; or

3. Inadequate review or failure to make a review in accordance with 10 CFR Part 21.

E. Severity V—Other violations, such as failure to follow procedures, that have other than minor safety or environmental significance.

F. Severity VI—Violations that have minor safety or environmental significance.

### Supplement VI.—Severity Categories

#### Fuel Cycle Operations

A. Severity I—Violations involving:

1. A nuclear criticality accident; or

2. A system designed to prevent or mitigate a serious safety event not being operable when actually required to perform its design function.

B. Severity II—Violations involving:

1. A system designed to prevent or mitigate a serious safety event being inoperative;

2. Conduct of activities not authorized by the license that have a significant safety implication; or

3. Failure to make an immediate or prompt report required to be made by telephone or other electronic means.

C. Severity III—Violations involving:

1. A degraded system designed to prevent or mitigate a serious safety event (e.g., confinement barriers or criticality controls); or

2. Operation with a technically unqualified or unauthorized person resulting in a reduced margin of safety.

D. Severity IV—Violations involving:

1. Inadequate review or the failure to review activities in accordance with 10 CFR Part 21 or management reviews required by the license that are not performed or are performed inadequately but that do not result in a Severity Level I, II, or III violation;

2. Any operation limit not covered by Severity Level I, II, or III violations being exceeded;

3. Failure to follow requirements not covered in Severity Level I, II, or III violations, that reduces the margin of safety; or

4. Failure to make a required 30-day report.

E. Severity V—Other violations, such as failure to follow procedures, that have other than minor safety or environmental significance.

F. Severity VI—Violations that have minor safety or environmental significance.

### Supplement VII.—Severity Categories

#### Materials Operations

A. Severity I—Violations involving:

1. A technically unqualified or unauthorized person conducting a licensed activity that results in radiation levels, contamination levels, or releases that exceed 10 times the limits specified in the license;

2. Use of unauthorized equipment that results in radiation levels, contamination levels, or releases that exceed 10 times the limits specified in the license;

3. Possession or use of unauthorized materials requiring a license, that results in radiation levels, contamination levels, or releases that exceed 10 times the limits specified in the license;

4. Failure to perform required surveys, tests or evaluations, or to institute required safety precautions that results in radiation levels, contamination levels, or releases that exceed 10 times the limits specified in the license; or

5. A system designed to prevent or mitigate a serious safety event not being operable when actually required to perform its design function.

B. Severity II—Violations involving:

1. A technically unqualified or unauthorized person conducting a licensed activity that results in radiation levels, contamination levels, or releases in excess of license limits;

2. Possession or use of unauthorized equipment or material in the conduct of licensed activities that results in radiation levels, contamination levels, or releases that exceed limits specified in the license.

3. Failure to perform required surveys, tests, or evaluations that results in radiation levels, contamination levels, or releases that exceed the limits specified in the license.

4. Failure to make required initial notifications associated with Severity Level I or II violations; or

5. A system designed to prevent or mitigate a serious safety event being inoperative.

C. Severity III—Violations involving:

1. Failure to control access to licensed materials for radiation purposes as specified by NRC requirements;

2. Possession or use of unauthorized equipment or materials in the conduct of licensee activities;

3. Procurement of radioactive material for human use where such use is not authorized;

4. Conduct of licensed activities by a technically unqualified or unauthorized person;

5. Failure to make required initial notifications associated with Severity Level III violations; or

6. Degradation of a system designed to prevent or mitigate a serious safety event.

D. Severity IV—Violations involving:

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1. Failure to follow requirements not covered in Severity Level I, II, or III violations that reduce the margin of safety (e.g., failure to determine that a radiographic source is fully retracted after an exposure);

2. Failure to maintain patients containing cobalt-60, cesium-137, or iridium-192 implants hospitalized, to conduct required leakage or contamination tests, or use of improperly calibrated equipment; or

3. Inadequate review or the failure to review activities in accordance with 10 CFR Part 21 or management reviews required by the license that are either not performed or not performed adequately but that do not result in a Severity Level I, II, or III violation.

E. Severity V—Other violations, such as failure to follow procedures, that have other than minor safety or environmental significance.

F. Severity VI—Violations that have minor safety or environmental significance.



## PETITIONS FOR RULEMAKING

grant relief from safeguards reporting requirements for small quantities of byproduct material and grant relief from both safeguards and criticality safety controls for small quantities of fissile material.

Two persons commented on the costs of NRC licensing and inspection fees and the beneficiaries of NRC services. Fees associated with fissile material licensing and inspection activities (and all other fee categories) are based on the sum on the average of the direct and indirect costs that the NRC incurs in furnishing the services for a member of the class of identifiable recipients for which the fees are assessed. Excluded from consideration for recovery are budgeted regulatory costs that are part of a program conducted on behalf of the public.

One person expressed the opinion that the inclusion of 10 CFR Part 34, "Licenses for Radiography and Radiation Safety Requirements for Radiographic Operations," within the scope of 10 CFR Part 21, "Reporting of Defects and Noncompliance," is not necessary. The NRC's regulations in 10 CFR Part 21 implement section 208 of the Energy Reorganization Act of 1974, as amended. Part 21 requires, among other things, that information reasonably indicating that a licensed activity or basic component supplied to such activity fails to comply with the Atomic Energy Act of 1954, as amended, or any applicable rule, regulation, order, or license of the NRC relating to substantial safety hazards, or contains a defect which could create a substantial safety hazard should be reported. Incident and overexposure reporting requirements had been in existence in Commission regulations for a number of years before enactment of the Energy Reorganization Act of 1974 (which contains section 206) in October 1974.

That person also expressed the opinion that the inclusion of industrial radiography licensees in 10 CFR 71.12, "General License for Shipment in DOT Specification Containers, in Packages Approved for Use by Another Person, and in Packages Approved by a Foreign National Competent Authority," is not necessary. It is the general licensees delivering licensed radioactive material to a carrier for transport under the authority of 10 CFR 71.12(b) who must assure themselves and the NRC that the subject packages are as described in the packages approvals and that they are used, tested, and maintained in accordance with both the general and specific portions of an approved quality assurance program. (The NRC must exercise its regulatory authority through its general licensees who use package approvals because the NRC has no

general enforcement powers over package manufacturers or package owners unless they possess and use licensed radioactive material. They would, however, be subject to 10 CFR Part 21, "Reporting of Defects and Noncompliance.")

A copy of "Abstracts of Comments and Staff Responses: Proposal that Nuclear Regulatory Commission Be Divided into Two Separate Entities—Docket No. PRM 30-58," is available for public inspection at the Commission's Public Document Room at 1717 H Street NW., Washington, D.C. Single copies of the comment analysis may be obtained on request from the Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

### Assigned Functions

The Energy Reorganization Act of 1974, as amended, was enacted by the Congress and approved as Public Law 93-438 on October 11, 1974.

Title II of that Act established the Nuclear Regulatory Commission and transferred to the Nuclear Regulatory Commission all the licensing and related regulatory functions of the Atomic Energy Commission.

In assigning those functions within the Nuclear Regulatory Commission, the Congress not only distinguished between nuclear reactors and other licensed facilities and nuclear materials, but also gave due and proper emphasis to functions which are vital to the public health and safety and the safe and efficient operation of both nuclear reactors and other licensed activities.

Sec. 203(b) of that Act provides that the Director of Nuclear Reactor Regulation shall perform such functions as the Commission shall delegate including principal licensing and regulation involving all facilities and materials licensed under the Atomic Energy Act of 1954, as amended, associated with the construction and operation of nuclear reactors licensed under the Atomic Energy Act of 1954, as amended.

Sec. 204(b) of the Energy Reorganization Act of 1974, as amended, provides that the Director of Nuclear Material Safety and Safeguards shall perform such functions as the Commission shall delegate including principal licensing and regulation involving facilities and materials licensed under the Atomic Energy Act of 1954, as amended, associated with the processing, transport, and handling of nuclear materials, including the provision and maintenance of safeguards against threats, theft, and sabotage of such licensed facilities and materials. The Nuclear Regulatory Commission has used the flexibility provided by Sec. 204(b) of the Energy

Reorganization Act of 1974, as amended, to establish within the Office of Nuclear Material Safety and Safeguards the Division of Fuel Cycle and Material Safety to perform those licensing and regulatory activities which pertain to the processing, transport, and handling of nuclear materials off the nuclear reactor site.

The Energy Reorganization Act of 1974, as amended, provides no authority under which the Nuclear Regulatory Commission, on its own initiative, may transfer any licensing or related regulatory function to a new or established agency of the Federal Government.

### Alternative Organization Forms

Alternative organization forms for nuclear regulation have been considered in recent studies conducted on or for the Nuclear Regulatory Commission.

Sec. 308 of the Energy Reorganization Act of 1974, as amended, required the Comptroller General of the United States to audit, review, and evaluate the implementation of the provisions of Title II of that Act by the Nuclear Regulatory Commission not later than sixty months after the effective date of that Act and submit to the Congress a report on his audit.

In the Comptroller General's report to Congress, "The Nuclear Regulatory Commission: More Aggressive Leadership Needed," EMD-80-17, dated January 15, 1980, the General Accounting Office (GAO) identified an alternative (separating NRC into separate policymaking and regulatory agencies) similar to the petitioner's proposal.

GAO noted that separation of NRC into two agencies could build on the strengths of both the commission and the single administrator forms of nuclear regulation. Policymaking on critical unresolved nuclear regulation issues could continue under the commission form with the advantage of multilateral deliberations. At the same time, day-to-day regulation of nuclear activities could proceed under an agency headed by a single administrator with prospects for better management of these day-to-day activities.

GAO discussed this alternative with a cross-section of people knowledgeable of nuclear regulation, including representatives of Government, the nuclear industry, public interest groups, and academia. Opinion on the alternative ranged from active interest to a belief that it represents an unnecessary proliferation of Federal regulatory agencies.

GAO chose not to recommend any alternative to strengthening the present commission because none of the alternative forms appeared to have a

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clear-cut advantage. In conclusion, GAO stated:

Ultimately, the Congress must consider the advantages and disadvantages of various organizational forms and decide on the organizational structure which, on balance, best represents what the Congress wants for nuclear regulation.

### Grounds for Denial

The Commission has given careful consideration to petition for rule making PRM 30-56 and the public comments received thereon and has decided to deny the petition on the grounds that, given the structure of the Energy Reorganization Act of 1974, as amended, it is clear that Congress intended the newly created Nuclear Regulatory Commission to have licensing and related regulatory authority not only over nuclear reactors, uranium milling, nuclear fuel processing and reprocessing, and other areas dealing with fissile materials but also have this same authority over byproduct materials. The NRC itself cannot "... separate the United States Nuclear Regulatory Commission into two separate entities..." Such a separation could only be accomplished in either of two ways: (1) enactment of legislation by the U.S. Congress, the method by which the existing NRC was created; or (2) through implementation of an Executive Reorganization Plan pursuant to 5 U.S.C. 901 *et seq.*

A copy of the petition for rule making and copies of the letters of comment and the Commission's letter of denial are available for public inspection at the Commission's Public Document Room at 1717 H Street NW., Washington, D.C.

**SUMMARY:** The Nuclear Regulatory Commission is publishing for public comment, as a petition for rulemaking, a motion filed before the Commission on September 9, 1980, by the General Atomic Company. This petition, which has been assigned Docket No. PRM-30-57, requests that the Commission amend its regulation, 10 CFR Part 30, to permit persons exempt from regulation to receive ionizing radiation measuring instruments which contain more than one source of byproduct material.

**DATE:** Comment period expires December 15, 1980.

**ADDRESSES:** A copy of the petition for rulemaking is available for public inspection in the Commission's Public Document Room, 1717 H Street, NW., Washington, DC. A copy of the petition may be obtained by writing to the Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

All persons who desire to submit written comments concerning the petition for rulemaking should send their comments to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch.

**FOR FURTHER INFORMATION CONTACT:** J. M. Felton, Director, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: 301-492-7211.

**SUPPLEMENTARY INFORMATION:** The petitioner states, in part, that "... it seem[s] evident that the particular language of the regulations (§ 30.15(a)(9)), read to limit licenses of instruments containing byproduct material to persons exempt from regulation to a single source per instrument, was in effect the result of a situation not envisioned at the time of drafting..." The petitioner further states that "These (the petitioner's) instruments are devices which perform several radiation monitoring functions..." (and) "... the instruments would have to be redesigned, each as a single function instrument with a single exempt quantity byproduct source. To do so would increase costs and delay delivery of instrumentation important to monitoring radiation and radioactive materials in and around major nuclear facilities. There is no compromise of public health and safety by permitting use of more than one source in a single multi-functional device."

The petitioner requests that 10 CFR 30.15(a)(9) be amended to read as follows:

### § 30.15 Certain Items containing byproduct material.

(a) "... any person is exempt from the ... regulations in ... this chapter to the extent that such person receives, possesses, uses, transfers, owns, or acquires the following products:

(9) Ionizing radiation measuring instruments containing, for purposes of internal calibration or standardization, sources of byproduct material each not exceeding the applicable quantity set forth in §30.71, Schedule B.

➤ 45 FR 67673

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### 10 CFR Part 30

[Docket No. PRM-30-57]

General Atomic Co.; Filing of Petition for Rulemaking

AGENCY: Nuclear Regulatory Commission.

ACTION: Publication of Petition for Rulemaking from General Atomic Company.

## PART 2 • STATEMENTS OF CONSIDERATION

On the other hand, the use of an "alternate board member" <sup>1</sup> does not arguably violate the statutory principles discussed above. The use of an alternate board member will not require a separate hearing or proceeding as would use of a special master. The alternate board member will sit with the three-member licensing board, will ask questions, comment upon testimony and provide his advice on the record and in the presence of the parties to the licensing board. The licensing board will still preside at the reception of the evidence, will still rule on issues of credibility and admissibility and will decide all issues in the case. The recommended decision of the alternate board member will be made on-the-record with an opportunity for the parties to comment thereon. The licensing Board Panel's practice of avoiding off-the-record communications between the Board and other Panel members on any fact in issue will apply to communications between the Board and the alternate after the alternate's report has been received. Thus no party will lose any statutory rights and each party will be given an opportunity to provide views and comments on the alternate member's reports to the Licensing Board. In addition, that party aggrieved by any decision of the Board, based in part on an alternate member's decision, will have an opportunity to appeal that decision to the Atomic Safety and Licensing Appeal Board. Thus the Commission believes that no changes are necessary to the proposed rule on use of alternate board members as clarified above.

The Commission adopts final rules on the use of part-time ASLBP members as follows:

Section 2.722(a)(1) provides for technical interrogators who may assist the presiding officer during the hearing by examining witnesses. The interrogator will play no part in the decision and will provide no advice to the Board. No changes are necessary to the proposed rules. See 45 FR 5308.

Section 2.722(a)(2) authorizes special masters to hear evidentiary presentations by the parties on specific technical matters and, upon completion of the presentation of evidence, to prepare a report that would become part of the record. Such use shall be upon

consent of all the parties. The parties will have an opportunity to comment upon the report and may appeal evidentiary rulings to the presiding officer. The presiding officer will retain final decisionmaking authority over the issues heard and reported on by the special master. The proposed rule is modified to provide for consent of the parties.

Section 2.722(a)(3) authorizes an alternate board member to participate in that portion of the proceeding relating to his or her area of expertise and to report conclusions to the presiding officer. The alternate board member, as clarified above, shall ask questions, provide advice and provide a written record of his advice to the Board. However, the three-member Board shall preside at all sessions and rule on all questions of evidence and other motions directed during that portion of the proceeding. The Board shall also retain all decisionmaking authority. With the explanation provided in this supplementary information, no changes are necessary.

Section 2.722(b) authorizes consultants to brief the Board as described in the proposed rule. In addition, modifications to existing Sections 2.718 and 2.719 shall be made as described in the proposed rule. No changes are necessary to either of these proposals. 45 FR 5308. A minor change to the proposed addition to Part 2, Appendix A has been made to avoid confusion in the use of the term "alternate board member" with the term "alternate" in 10 CFR 2.721(b).

Because the final rules are not substantive and relate only to matters of Board procedure and do not require any change in conduct on the part of any party, the rules are effective immediately when published in the Federal Register 5 U.S.C. 553(d). Licensing Boards, however, engaged in licensing hearings when the rule becomes effective should solicit the views of the parties before first using a special assistant.

➤ 45 FR 68919

Published 10/17/80

Effective 10/17/80

### 10 CFR Part 2

#### Changes in Rules of Practice Governing Summary Disposition on Pleadings

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is amending its regulations governing the authority of its presiding officers to consider motions for summary disposition of certain issues on the pleadings, 10 CFR Section 2.749, to permit parties to file answers supporting such motions.

**EFFECTIVE DATE:** October 17, 1980.

**FOR FURTHER INFORMATION CONTACT:** Bruce A. Berson, Office of the Executive Legal Director, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Telephone (301) 492-7678.

**SUPPLEMENTARY INFORMATION:** Section 2.749 of the Commission's Rules of Practice for Domestic Licensing Proceedings, "Authority of presiding officer to dispose of certain issues on the pleadings," establishes a procedure whereby a party to an administrative proceeding may move the presiding officer to rule in that party's favor as to all or any part of the matters involved in the proceeding. The presiding officer will render the decision sought by the moving party if the filings in the proceeding show that there is no genuine issues as to any material fact and that the moving party is entitled to a decision as a matter of law.<sup>1</sup>

Section 2.749(a) now provides that "any other party may serve an answer opposing the motion [for summary disposition], with or without supporting affidavits, within twenty (20) days after service of the motion" (emphasis added). However, it has been a long-standing practice of the regulatory staff to file an answer to the motions of other parties for summary disposition—in support or in opposition, as appropriate.

The Commission has determined that the rule should be clarified to specifically permit responses in support of, as well as in opposition to, motions for summary disposition. Since important legal and procedural consequences flow from a presiding officer's grant or denial of a motion for summary disposition, the Commission believes that the views of its regulatory staff, as well as the views of other parties, should be considered and may be of substantial assistance to the presiding officer. Therefore, the Commission is clarifying § 2.749(a) to specifically permit responses from parties which support motions for summary disposition. The clarification will help ensure that the relevant issues are fully developed before the presiding officer rules on the motion and is

<sup>1</sup> The term "alternate board member" as a "special assistant" should not be confused with use of the term "alternate" in 10 CFR 2.721(b). In the latter situation the "alternate" is a substitute for a member of a Board who becomes unavailable. See generally *New England Coalition on Nuclear Pollution v. NRC*, 582 F.2d 87, 99-100 (1st Cir. 1978). In this rule (10 CFR 2.722(a)(3)), the "alternate" sits with the three member Board and not instead of the Board or any of its members.

<sup>1</sup> The procedure established in the rule may be used only for the determination of specific subordinate issues in any proceeding involving a construction permit for a production or utilization facility and may not be used to determine the ultimate issue as to whether a construction permit shall be authorized. Section 2.749(d).

## PART 2 • STATEMENTS OF CONSIDERATION

consistent with the general policy of the Commission's Rules of Practice to encourage parties to express their views before adjudicatory tribunals. The amendment also harmonizes the Commission's summary disposition procedure with the provisions of 10 CFR 2.730(c), "Motions," which permit a party to file an answer in support of or in opposition to a motion filed by another party.

Since statements in support of a motion for summary disposition may raise facts and arguments not presented by the moving party and need not be served until the time at which an answer opposing the motion must be served, § 2.749(a) is also amended to permit the party opposing the motion to file a supplemental response in writing which addresses any new matters raised in supporting statements and not presented in the initial motion. The Commission expects its presiding officers to establish expeditious time limits on a case-by-case basis for the filing of any response to supporting statements, consistent with the requirements of fairness. This departure from Commission practice (which does not ordinarily allow further pleadings beyond the initial pleading and response thereto) is desirable here to avoid potential unfair surprise to parties opposing motions for summary disposition. No further supporting statements or responses thereto shall be entertained.

Because this amendment is not substantive and relates only to matters of agency procedure, notice of proposed rulemaking, and public procedure thereon, is unnecessary, and the amendment is effective on October 17, 1980 without the customary 30 days notice.

(5 U.S.C. 553(b) and 553(d))

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of Title 5 of the United States Code, the following amendments to Title 10, Chapter 1, Code of Federal Regulations, Part 2 are published as a document subject to codification.



## PART 73 • STATEMENTS OF CONSIDERATION

number of alternative routes. The comments suggest that the approvals remain valid indefinitely.

Current staff policy is to approve a number of alternative routes. The actual number of routes that can be approved is, of course, limited. Once a route is approved, the approval would remain valid until new information suggests that the approval should be withdrawn.

(20) *Road shipments: Rush-hour concern.* One comment suggests that in the event of routing through a heavily populated area, the scheduling should be planned so as to avoid the local rush hour traffic.

The staff performs route surveys, including route surveys through heavily populated areas, and makes arrangements with LLEAs along the route of the shipments for their response to an emergency or a call for assistance. Rush-hour concerns are taken into account during this planning.

(21) *Road shipments: Route planning.* Some comments contend that the information given in the guidance document and in the related reference documents does not provide detail sufficient to distinguish and select highway routes.

The staff agrees with the comments, but notes that the Census Bureau data supplemented by local road maps jointly provide a sufficient basis for route selection. Furthermore, the revised rule allows greater use of interstate highways, which should make route selection easier. Accordingly, no changes were made in the regulation or guidance as a result of this comment.

(22) *Road shipments: Drivers.* Some comments suggest that the NRC should confer more closely with the DOT inasmuch as it appears that some driver requirements imposed by NRC are in conflict with DOT requirements. One comment suggests that 10 CFR 73.37(b)(1) be modified to specify two trained drivers rather than one. Comments suggest that in view of the potential consequences from accidents, drivers should operate spent fuel shipment vehicles in the safest and most reassuring way in order to instill public confidence.

With respect to the coordination suggestion, the staff notes that in accordance with the terms of a Memorandum of Understanding, the latest version of which was published in the *Federal Register* on July 2, 1979, the NRC and DOT have agreed to advise and consult with one another before either issues a new regulation. This procedure was followed before issuance of this regulation. The DOT review did not reveal any conflicts between DOT regulations and the NRC interim

regulation. The suggestion that the requirements of 10 CFR 73.37(b)(1) be modified to make explicit that two properly trained truck drivers satisfy the requirement was not adopted because the original phrasing already permits that option. The suggestion that two truck drivers rather than one should be required was not adopted because there appears to be no adequate safeguards justification. The provision is allowed to stand because it allows greater flexibility for the licensee in designing his security arrangements and it does not sacrifice the effectiveness of protection arrangements.

The NRC agrees with the comment that shipment vehicles should be operated safely. However, the rule was not changed because the subject of safe driving is not within the scope of this physical protection rule change proceeding.

(23) *Road shipments: Escorts.* Some comments suggest that the regulation should be changed to always require an escort vehicle to accompany the shipment vehicle; other comments contend that an escort vehicle is undesirable because it increases the likelihood of an accident. Some comments are concerned that the duties assigned to drivers and escorts in the regulation and guidance would overwhelm the drivers and escorts for shipments longer than one day. One comment proposes that the NRC should license escorts and test them annually. Finally, some comments suggest that more than one escort might be needed for extended stopovers.

The Commission has decided that the current level of protection, which permits a single vehicle system to be used outside of heavily populated areas, is adequate. In addition, a second escort or other added safeguards measures are required for transiting urban areas. The Commission has also decided that the duties of the drivers and escorts are straight-forward; that the training program as revised (Appendix D of 10 CFR Part 73) is adequate. With respect to the size of the escort force, the regulation specifies the number, capabilities, and duties of personnel who are to be on duty at any one time; it is the obligation and responsibility of the licensee to provide a force size sufficient to provide for relief and rest periods.

(24) *Road shipments: Call-in schedule.* Some comments contend that the two-hour call-in schedule required by 10 CFR 73.37(b)(2) is not practicable; they argue that carrying out the requirements would violate DOT regulations by disturbing the co-driver's rest period on long trips. The comments suggest that an eight-hour call-in schedule would be

more appropriate. Comments also point out that the two-hour call-in schedule (if carried out) would require extra stops for telephone calls, thereby making the shipment vulnerable to sabotage.

The two-hour call-in schedule has been reviewed with DOT. Representatives of DOT found nothing in the requirement that was unsafe for a lone driver to carry out while driving or that was in conflict with DOT regulations. Accordingly, the two-hour call-in requirement is allowed to stand. The Commission reaffirms its judgment that the benefits from two-hour call-ins justify the additional risk of those instances where the vehicle must be stopped and the call-in done by conventional telephone.

(25) *Road shipments: Citizens band (CB) radio.* Some comments suggest that there is no assurance that CB contacts can be made, and therefore the requirement for CB radio in the shipment vehicle is superfluous. Other comments note that the designated control location is not required to be equipped with a CB radio and ask that the NRC reconsider whether a potential saboteur could gain advantage from this situation.

A requirement for CB radio is included in recognition of the fact that CB radio offers an inexpensive back-up to the primary communication system.

It is true that there is no guarantee that a CB contact can be established in the event that there is a need to call for assistance. On the other hand, the adversary is faced with a back-up communications system that he can neither ignore nor readily defeat. The CB requirement is included because it, in some measure, reduces an adversary's likelihood of success. Also, CB radio is useful for communication among the escort vehicles and shipment vehicle and can be used in most heavily populated areas to contact the LLEA. However, because the transmission range of CB radio is short compared with the likely distance that shipments will be transported, there is no requirement for a CB radio to be installed in the control location.

(26) *Rail shipments: Special trains.* Some comments urge the use of special trains to transport spent fuel rail casks. These comments contend that special trains have the following advantages: The requirements of 10 CFR 73.37(c) are difficult for regular trains but can be handled readily by special trains. Special train speeds are lower and can be tailored to circumstances. Special trains are shorter than regular trains with the advantage that "burying" the shipment car under other cars in the event of an accident is less likely; this

## PART 73 • STATEMENTS OF CONSIDERATION

feature, the comments argue, would be very significant in the event of a fire. A special train offers better observation of the shipment car. Most railroad accidents occur in rail yards and special trains spend less time in rail yards than do regular trains. Special trains have priority in use of track over regular trains. Regular trains could conceivably carry spent fuel together with other hazardous material, such as explosives or inflammables, in different cars of the same train; this situation would not occur with a special train.

Special routing is possible to avoid rail yards and heavily populated areas. Finally, the probability of certain classes of train accidents, such as brake failure or railroad crossing accidents, is lower because special trains are shorter than regular trains.

Other comments take the opposite view and suggest that the use of regular trains for spent fuel shipments is entirely satisfactory for the following reasons: The likelihood of hijacking a regular train from a low population to a high population area is remote in the extreme. Special trains have no particular advantage in avoiding high population areas. Special trains, as now proposed, would be stopped to yield right-of-way to regular trains.

NRC approval of alternative routes would provide adequate response to the uncertainties of weather, rail damage, and other uncontrollable influences.

A regular train in a rail yard would be under surveillance by the escort and the railroad police. Special trains have no advantage in communications; moreover, rail traffic controllers always know the approximate location of their trains.

Needed protection requirements for rail shipments can be met by regular trains. Accordingly, the suggestion that the regulations be modified to require the use of special trains was rejected.

(27) *Rail shipments: Arrangements with LLEA.* Some comments suggest that arrangements with LLEAs are needed only when a shipment car is stopped in a rail yard. This suggestion was not adopted because it would be inconsistent with the fundamental protection measure that an escort should always be present with a spent fuel shipment and that escort should be able to request and obtain assistance from the LLEA independent of the location of the shipment.

(28) *Rail shipments: Escorts.* Some comments contend that escorts are not needed when a train is moving. Other comments point out that more than one escort will be needed to provide surveillance during extended stopovers and that special lighting might be

needed for effective surveillance. One comment points out that no existing spent fuel rail cask car provides for an escort within the car, as is implied by the guidance document and the regulation. Finally, some comments request that the NRC consider speed restrictions for spent fuel shipments and reconsider its decision not to require surveillance while the train is moving—particularly while the train is moving very slowly.

One of the fundamental protection measures is that an escort should always be present near the shipment, independent of the location of the train and independent of whether the train is moving. Accordingly, the suggestion that an escort is not needed while the train is moving was rejected.

One intent of the requirement is that a stopped shipment car always be under observation; it is the responsibility of the licensee to provide an escort force sufficiently large to meet that intent.

The object of the observation requirement is the early detection of circumstances that threaten deliberate damage to the shipment in a heavily populated area. Lighting in heavily populated areas is expected to be sufficient for this purpose.

With respect to the comment concerning the escort in the same rail car with the spent fuel cask, the guidance document was written so as not to preclude the escort from riding in a rail car containing a spent fuel cask. The staff had in mind a small cask in which slightly greater than exempted quantities of spent fuel might be shipped rather than a typical rail cask containing up to ten fuel assemblies.

The Commission has recognized the need for surveillance capabilities while trains are moving, and has reflected this in the regulation.

(29) *Rail shipments: Strengthening of requirements proposed.* One comment asserts that spent fuel shipments by road are inherently unsafe and that shipments should be made by rail. The comment contends that current capabilities for the safety and protection of rail shipments are inadequate and identifies numerous areas where he believes improvements are needed.

The Commission disagrees with the view that spent fuel shipments by road are inherently unsafe. The comment does not provide an adequate justification for the extreme measures proposed pertaining to rail shipments. The Commission has no new information to modify its current view that spent fuel shipments can be moved safely on the existing rail system. Accordingly, no changes were made to

the regulation or the guidance as a result of this comment.

The following modifications to the rule have been coordinated with the Department of Transportation in accordance with the Memorandum of Understanding between NRC and DOT that was published in the *Federal Register* on July 2, 1979. The Department of Transportation has determined that the NRC rule is not in conflict with current DOT regulations.

These amendments to the interim final rule are being published in effective form subject to codification. In the *Federal Register* notice issuing the interim final rule (44 FR 34466), comments were requested on the rule even though it was published in effective form. It is those comments received that have led to the amendments being made here. It is as if comments had been received on a proposed rule. Accordingly, the Commission for good cause finds that further notice and public procedure is unnecessary.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of Title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Part 73, are published as a document subject to codification.

### ➤ 45 FR 67645

Published 10/14/80

Effective 10/14/80

### 10 CFR Part 73

#### Physical Protection of Plants and Materials: Correction

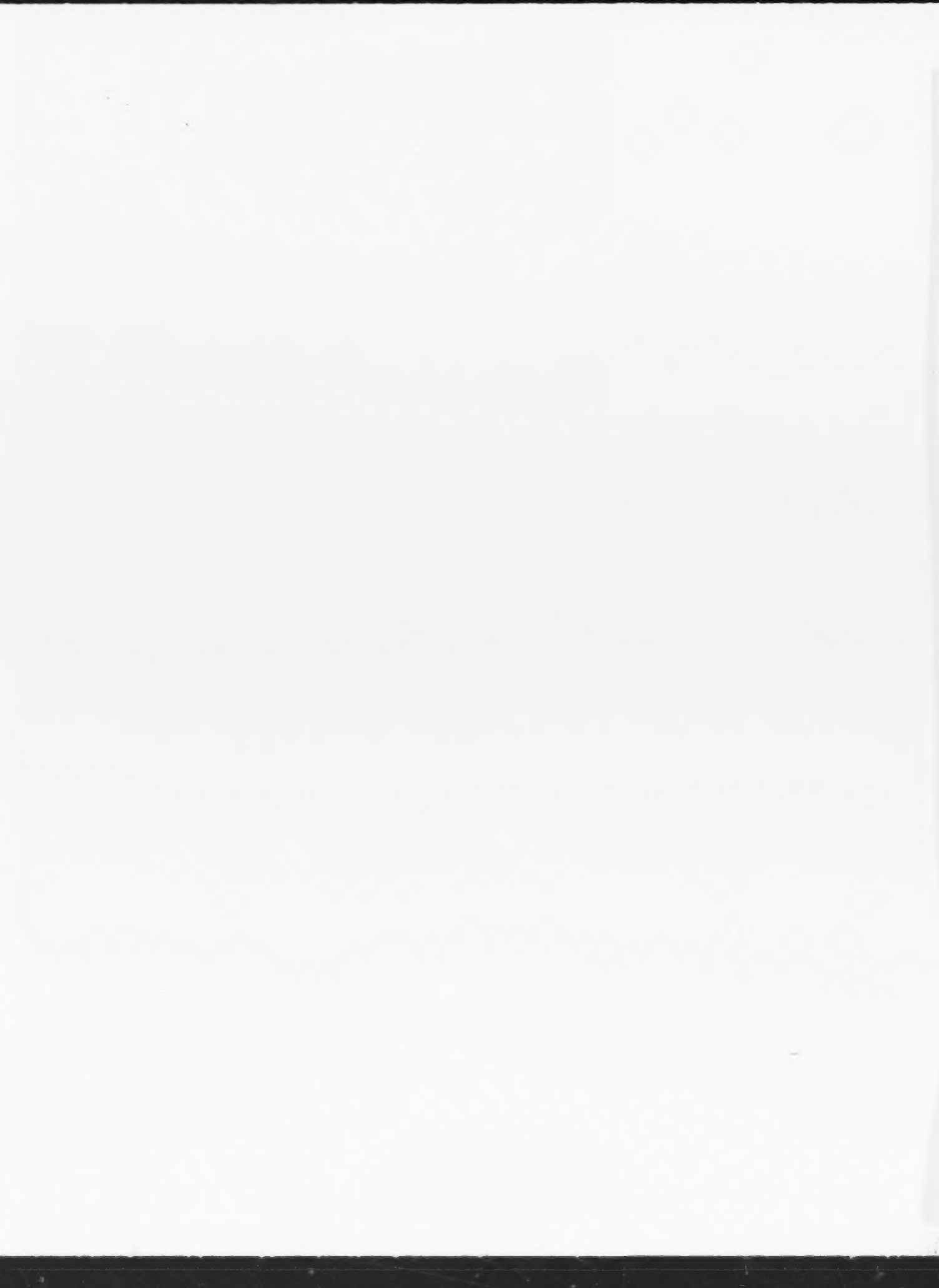
**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Correction.

**SUMMARY:** In a final rule document published in the *Federal Register* July 24, 1979 (44 FR 43282), § 73.1(b) was revised. An error was made in the amendatory language resulting in the inadvertent deletion of § 73.1(b)(2), (3), (4), and (5). It was not the intent of the Commission to delete paragraphs (2), (3), (4) and (5) of § 73.1(b). This document corrects this error and republishes § 73.1(b) as it should appear including a revision made to § 73.1(b)(5) as published at 45 FR 37409 on June 3, 1980.

**FOR FURTHER INFORMATION CONTACT:** John D. Philips, Chief, Rules and Procedures Branch, Division of Rules and Records, Office of Administration, Nuclear Regulatory Commission, Washington, DC 20555, (301) 492-7088.







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Item 1052  
UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS - ENERGY

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**SUPPLEMENT NUMBER**

**4**

**DATE ISSUED:**

(October 20, 1980 - October 31, 1980)

9407  
November 5, 1980

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## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

An interpretation of this section is contained in 10 CFR Part 8, § 8.3.

### § 2.711 Extension and reduction of time limits.

(a) Except as otherwise provided by law, whenever an act is required or allowed to be done at or within a specified time, the time fixed or the period of time prescribed may for good cause be extended or shortened by the Commission or the presiding officer, or by stipulation approved by the Commission or the presiding officer.

(b) In any instance in which this part does not prescribe a time limit for an action to be taken in the proceeding, the Commission or the presiding officer may set a time limit for that action.

### § 2.712 Service of papers, methods, proof.

(a) *Service of papers by the Commission.* Except for subpoenas, \*\*\* the Commission will serve all orders, decisions, notices, and other papers issued by it upon all parties.

(b) *Who may be served.* Any paper required to be served upon a party shall be served upon him or upon the representative designated by him or by law to receive service of papers. When a party has appeared by attorney, service must be made upon the attorney of record.

(c) *How service may be made.* Service may be made by personal delivery, by first class, certified or registered mail including air mail, by telegraph or as otherwise authorized by law. Where there are numerous parties to a proceeding, the Commission may make special provision regarding the service of papers.

(d) *When service complete.* Service upon a party is complete:

(1) By personal delivery, on handing the paper to the individual, or leaving it at his office with his clerk or other person in charge or, if there is no one in charge, leaving it in a conspicuous place therein or, if the office is closed or the person to be served has no office, leaving it at his usual place of residence with some person of suitable age and discretion then residing there;

(2) By telegraph, when deposited with a telegraph company, properly addressed and with charges prepaid;

(3) By mail, on deposit in the United

States mail, properly stamped and addressed, or

(4) When service cannot be effected in a manner provided by subparagraphs (1) to (3) inclusive of this paragraph, in any other manner authorized by law.

(e) *Proof of service.* Proof of service, stating the name and address of the person on whom served and the manner and date of service, shall be shown for each document filed, and may be made by:

(1) Written acknowledgment of the party served or his counsel;

(2) The certificate of counsel if he has made the service; or

(3) The affidavit of the person making the service.

(f) *Free copying and service.* Except in an antitrust proceeding, in any adjudicatory proceeding on an application for a license or an amendment thereto, the Commission, upon request by a party other than the applicant, will copy and serve without cost to that party that party's testimony (including attachments), proposed findings of fact and conclusions of law, and responses to discovery requests. These documents should be filed with Docketing and Service not less than five days before they are due to be submitted to an adjudicatory board, unless the presiding officer provides otherwise.

### § 2.713 Appearance and practice before the Commission in adjudicatory proceedings.

(a) *Standards of Practice.* In the exercise of their functions under this subpart, the Commission, the Atomic Safety and Licensing Appeal Boards, the Atomic Safety and Licensing Boards, and Administrative Law Judges function in a quasijudicial capacity. Accordingly, parties and their representatives in proceedings subject to this subpart are expected to conduct themselves with honor, dignity, and decorum as they should before a court of law.

(b) *Representation.* A person may appear in an adjudication on his or her own behalf or by an attorney-at-law. A partnership, corporation or unincorporated association may be represented by a duly authorized member or officer, or by an attorney-at-

law. A party may be represented by an attorney-at-law provided the attorney is in good standing and has been admitted to practice before any Court of the United States, the District of Columbia, or the highest court of any State, territory, or possession of the United States. Any person appearing in a representative capacity shall file with the Commission a written notice of appearance which shall state his or her name, address, and telephone number; the name and address of the person on whose behalf he or she appears; and, in the case of an attorney-at-law, the basis of his or her eligibility as a representative or, in the case of another representative, the basis of his or her authority to act on behalf of the party.

(c) *Reprimand, Censure or Suspension from the Proceeding.*

(1) A presiding officer, an Atomic Safety and Licensing Appeal Board, or the Commission may, if necessary for the orderly conduct of a proceeding, reprimand, censure or suspend from participation in the particular proceeding pending before it any party or representative of a party who shall refuse to comply with its directions, or who shall be guilty of disorderly, disruptive, or contemptuous conduct.

(2) A reprimand, a censure or a suspension which is ordered to run for one day or less shall be ordered with grounds stated on the record of the proceeding and shall advise the person disciplined of the right to appeal pursuant to paragraph (c)(3) of this section. A suspension which is ordered for a longer period shall be in writing, shall state the grounds on which it is based, and shall advise the person suspended of the right to appeal and to request a stay pursuant to paragraphs (c)(3) and (c)(4) of this section. A proceeding may be stayed for a reasonable time in order for an affected party to obtain other representation if this would be necessary to prevent injustice.

(3) Anyone disciplined pursuant to this section may within ten (10) days after issuance of the order file an appeal with the Atomic Safety and Licensing Appeal Board or the Commission, as appropriate. The appeal shall be in writing and state concisely, with supporting argument, why the appellant believes the order was erroneous, either as a matter of fact or law. The Appeal Board or Commission, as appropriate, shall consider each appeal on the merits, including appeals in cases in which the suspension period has already run. If necessary for a full and fair consideration of the facts, the Appeal Board or Commission, as appropriate, may conduct further evidentiary

\* This paragraph shall be in effect for one year from July 25, 1980 unless extended by the Commission. Notice of an extension will appear in the Federal Register.

† Changed 28 FR 10151.

• Deleted 28 FR 10151.

## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

hearings, or may refer the matter to another presiding officer for development of a record. In the latter event, unless the Appeal Board or the Commission, as appropriate, provides specific directions to the presiding officer, that officer shall determine the procedure to be followed and who shall present evidence, subject to applicable provisions of law. Such hearing shall commence as soon as possible. In the case of an attorney, if no appeal is taken of a suspension, or, if the suspension is upheld at the conclusion of the appeal, the presiding officer, the Appeal Board, or the Commission, as appropriate, shall notify the state bar(s) to which the attorney is admitted. Such notification shall include copies of the order of suspension, and, if an appeal was taken, briefs of the parties, and the decision of the Appeal Board or Commission.

(4) A suspension exceeding 1 day shall not be effective for 72 hours from the date the suspension order is issued. Within this time a suspended individual may request a stay of the sanction from the appropriate reviewing tribunal pending appeal. No responses to the stay request from other parties will be entertained. If a timely stay request is filed, the suspension shall be stayed until the reviewing tribunal rules on the motion. The stay request shall be in writing and contain the information specified in §§ 2.788(b)(1), (2) and (4) of this part. The Appeal Board or Commission, as appropriate, shall rule on the stay request within 10 days after the filing of the motion. The Appeal Board or Commission shall consider the factors specified in §§ 2.788(e)(1) and (e)(2) of this part in determining whether to grant or deny a stay application.

### § 2.714 Intervention.

(a)(1) Any person whose interest may be affected by a proceeding and who desires to participate as a party shall file a written petition for leave to intervene. In a proceeding noticed pursuant to § 2.105, any person whose interest may be affected may also request a hearing. The petition and/or request shall be filed not later than the time specified in the notice of hearing, or as provided by the Commission, the presiding officer or the atomic safety and licensing board designated to rule on the petition and/or request, or as provided in § 2.102(d)(3). Nontimely filings will not be entertained absent a determination by the Commission, the presiding officer or the atomic safety and licensing board designated to rule on the petition and/or request, that the petition and/or request should be granted based upon a balancing of the following factors in addition to those set out in paragraph (d) of this section:

(i) Good cause, if any, for failure to file on time.

(ii) The availability of other means whereby the petitioner's interest will be protected.

(iii) The extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record.

(iv) The extent to which the petitioner's interest will be represented by existing parties.

(v) The extent to which the petitioner's participation will broaden the issues or delay the proceeding.

(2) The petition shall set forth with particularity the interest of the petitioner in the proceeding, how that interest may be affected by the results of the proceeding, including the reasons why petitioner should be permitted to intervene, with particular reference to the factors in paragraph (d) of this section, and the specific aspect or aspects of the subject matter of the proceeding as to which petitioner wishes to intervene.

(3) Any person who has filed a petition for leave to intervene or who has been admitted as a party pursuant to this section may amend his petition for leave to intervene. A petition may be amended without prior approval of the presiding officer at any time up to fifteen (15) days prior to the holding of the special prehearing conference pursuant to § 2.751a, or where no special prehearing conference is held, fifteen (15) days prior to the holding of the first prehearing conference. After this time a petition may be amended only with approval of the presiding officer, based on a balancing of the factors specified in paragraph (a)(1) of this section. Such an amended petition for leave to intervene must satisfy the requirements of this paragraph (a) of this section pertaining to specificity.

(b) Not later than fifteen (15) days prior to the holding of the special prehearing conference pursuant to § 2.751a, or where no special prehearing conference is held, fifteen (15) days prior to the holding of the first prehearing conference, the petitioner shall file a supplement to his petition to intervene which must include a list of the contentions which petitioner seeks to have litigated in the matter, and the bases for each contention set forth with reasonable specificity. A petitioner who fails to file such a supplement which satisfies the requirements of this paragraph with respect to at least one contention will not be permitted to participate as a party. Additional time for filing the supplement may be granted based upon a balancing of the factors in paragraph (a)(1) of this section.

(c) Any party to a proceeding may file an answer to a petition for leave to intervene within ten (10) days after service of the petition, with particular reference to the factors set forth in paragraph (d) of this section. However, the staff may file such an answer within fifteen (15) days after service of the petition.

(d) The Commission, the presiding officer or the atomic safety and licensing board designated to rule on petitions to intervene and/or requests for hearing shall, in ruling on a petition for leave to intervene, consider the following factors, among other things:

(1) The nature of the petitioner's right under the Act to be made a party to the proceeding.

(2) The nature and extent of the petitioner's property, financial, or other interest in the proceeding.

(3) The possible effect of any order which may be entered in the proceeding on the petitioner's interest.

(e) An order permitting intervention and/or directing a hearing may be conditioned on such terms as the Commission, presiding officer or the designated atomic safety and licensing board may direct in the interests of: (1) Restricting irrelevant, duplicative, or repetitive evidence and argument, (2) having common interests represented by a spokesman, and (3) retaining authority to determine priorities and control the compass of the hearing.

(f) In any case in which, after consideration of the factors set forth in paragraph (d) of this section, the Commission or the presiding officer finds that the petitioner's interest is limited to one or more of the issues involved in the proceeding, any order allowing intervention

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of a notice of denial of the request for records or denial of a request for waiver or reduction of fees pursuant to this subpart, appeal such denial to the Executive Director for Operations. The appeal shall be in writing, addressed to the Executive Director for Operations, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, and should clearly state on the envelope and in the letter that it is an "Appeal from Initial FOIA Decision." An appeal that is not so marked will be deemed not to have been received by the NRC until it is actually received by the Executive Director for Operations.

(b) Except as provided in §9.13, the Executive Director for Operations will make a determination with respect to any appeal pursuant to this section within 20 working days after the receipt of such appeal.

(c)(1) If on appeal the denial of the request for records is upheld in whole or in part, the Executive Director for Operations will notify the person making such request of the denial, including the exemption relied upon, an explanation of how the exemption applies to the records withheld, and the reasons for asserting the exemption.

(2) If on appeal the denial of a request for waiver or reduction of fees for locating and reproducing records is upheld in whole or in part, the Executive Director for Operations will notify the person making such request of the denial, including a statement as to why the request does not meet the requirements of §9.14a.

(3) The requester shall be informed that the denial is a final agency action and that judicial review is available in a district court of the United States in the district in which the requester resides, or has his principal place of business, or in which the agency records are situated, or in the District of Columbia.

(d) Copies of all appeals and written determinations on appeal will be furnished by the Executive Director for Operations, or his designee, to the Director, Office of Administration, or his designee.

### §9.12 Production or disclosure of exempt records.

(a) Records of the kind specified in §9.5(a) shall not be produced or disclosed by NRC personnel, or NRC contractors who have possession of such

records, except in accordance with this Part or §§ 2.744 and 2.790 of this chapter.

(b) NRC personnel and NRC contractors from whom a record exempt from disclosure is sought shall follow the procedure specified below:

(1) If an exempt record is sought from NRC personnel, the request or subpoena shall promptly be forwarded to the Director, Office of Administration, who shall process the request as provided in this Part of take such other action as may be appropriate.

(2) If an exempt record is sought from an NRC contractor, the request or subpoena shall promptly be forwarded to the NRC contracting officer administering the contract who will then follow the procedure specified in paragraph (b)(1) of this section.

(3) NRC personnel or NRC contractors who are required by a subpoena to produce or disclose a record of the types included in §9.5(a) shall appear in response thereto and shall respectfully decline to produce or disclose the record described, basing refusal on this paragraph, unless production or disclosure has been authorized pursuant to this Part.

### §9.13 Extension of time for response.

(a) In unusual circumstances specified in paragraph (b) of this section, the time limits prescribed in §9.9 or §9.11 may be extended by not more than 10 working days by written notice to the person making such request, setting forth the reasons for such extension and the date on which a determination is expected to be dispatched.

(b) For purposes of this section, "unusual circumstances" means:

(1) the need to search for and collect the requested records from field facilities or other establishments that are separate from the office processing the request;

(2) the need to search for, collect, and appropriately examine a voluminous amount of separate and distinct records which are demanded in a single request; or

(3) the need for consultation, which shall be conducted with all practicable speed, with another agency having a substantial interest in the determination of the request or among two or more components of the NRC having substantial subject-matter interest therein.

(c) Any extension of time limits prescribed in §§9.9 and 9.11 may not exceed a combined total of 10 working days per request.

### §9.14 Charges for production of records.

(a)(1) Charges for the copying of records at the NRC Public Document Room (PDR), 1717 H St. NW., Washington, D.C. by the copying service contractor are as follows:

(i) Five cents per page for paper copy to paper copy, except for engineering drawings and any other records larger than 8½ x 14 inches for which the charge varies between \$1.00 to \$2.00 per square foot, depending upon size.

(ii) Twenty-four cents per page for microform to paper copy, except for engineering drawings and other records larger than 8½ x 14 inches for which the charge is \$3.00 per square foot or \$6.00 for a reduced size print (18 x 24 inches).

(iii) Twenty-two cents per microfiche to microfiche.

(iv) Forty cents per aperture card to aperture card.

(v) Charges for records copied by the contractor at the PDR must be paid when the copies are furnished.

(2) Self service, coin operated, copying machines are available at the PDR for the use of the public. Paper to paper is \$0.05 per page. Microform to paper is \$0.10 per page on the reader-printers.

(3) Mail order requests for contractor copying of NRC records may be made by writing to the PDR.

(i) The charges for mail order reproduction of records are the same as those set out in paragraph (a)(1) of this section, except there is a \$2.00 minimum charge for records, plus mailing or shipping charges.

(ii) Each order submitted by mail must contain a statement that the requester is willing to pay the applicable charges. The contractor will include an invoice when it sends the order to the requester. A requester may also open an account with the copying service contractor, Literature Research Company, P.O. Box 1001, Annandale, VA 22003 (703-941-8010).

44 FR 1598

40 FR 7893

45 FR 7025





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44 FR 15998  
45 FR 7025  
W (b) Requests for copies of records to be reproduced and furnished by the NRC at locations other than the NRC Public Document Room located in Washington, D.C., will be honored at the following charges:

(1) Sizes up to 8½ x 14 inches made on office copying machines—\$0.05 per page of copy.

(2) The charge for reproducing records other than those specified above will be computed on the basis of NRC's direct costs.

(3) If a request is for records at locations other than the NRC Public Document Room, a charge of \$5.00 per hour will be made for searching for the requested records by clerical or administrative employees and a charge of \$12.00 per hour for searching by professional or supervisory employees.

(4) When a computer search is necessary in order to fulfill a request, the computer search charge will be the actual direct cost of the computer search.

(5) Except as otherwise provided in §9.14a, unless the request specifically states that whatever cost is involved will be acceptable, or acceptable up to a specified limit, the NRC will, for requests involving anticipated costs in excess of the minimum specified in §9.14a(a), so advise the requester as provided in §9.14(b), and the request will not be

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deemed to have been received until a deposit equal to the estimated costs is received, or the requester has agreed to bear the anticipated costs, or a determination has been made on a request for waiver or reduction of fees. Fees may be required to be paid in full prior to the issuance of the requested records.

(6) Refunds of unused deposits or additional billings will be made to adjust the anticipated cost to the actual cost.

(c) In compliance with the Federal Advisory Committee Act, transcripts of testimony in NRC proceedings, which are transcribed by a reporting firm under contract with the NRC, may be purchased directly from the reporting firm at the cost of reproduction as provided for in the contract with the reporting firm, or may be purchased from the NRC at the cost of reproduction as provided in paragraphs (a) and (b) of this section.

(d) Copyrighted material will not be reproduced in violation of the copyright laws.

(e) The Director, Office of Administration, or his designee, or the Executive Director for Operations, on appeals, in accordance with the provisions of § 9.14a, will waive or reduce any fee required by this section upon a determination that waiver or reduction of the fee is in the public interest because furnishing the information can be considered as primarily benefiting the general public.

### § 9.14a Waiver or reduction of fees.\*

(a) Fees for searching and reproduction of records at locations other than the NRC Public Document Room shall be waived:

(1) for search fees when the time for the search does not exceed four hours, in the aggregate, for a request or series of related requests;

(2) where the records are requested by and made available to a Federal, State, or local government, to an inter-governmental agency, or to a foreign government or international agency, and furnishing the records without charge is an appropriate courtesy.

(b) Except as provided in paragraph (a) and (f) of this section, fees for searching and reproduction of records may be waived only upon request. A person requesting the NRC to waive or reduce search or reproduction fees under this subpart shall, as set forth in § 9.14b(b) provide sufficient factual information to permit NRC to make the determination whether waiver or reduction of the fee is in the public interest because furnishing the information can be considered as primarily benefiting the general public.

\* The application requirements contained in sections 9.14a(c) and 9.14b(d) have been approved by the U.S. General Accounting Office under number B-180225 (R0582).

(c) In making a request for waiver or reduction of fees, the requester shall provide a statement setting forth the following information to the extent possible:

(1) How the information obtained from the records, or how the conclusions or results from any review or analyses of the records, will be published or otherwise disseminated to the general public;

(2) The size of the public that will be benefited by the disclosure;

(3) The nature, significance and likelihood of any tangible benefit that the public may receive from dissemination of the information;

(4) The financial benefit, if any, the requester will receive from the use of the requested materials;

(5) The ability of the requester to pay for any of the anticipated costs;

(6) How the intended use of the various types of records requested is reasonably likely to:

(i) Result in actions to maintain or enhance the public's health, safety, or the quality of the environment;

(ii) Result in improved regulatory processes;

(iii) Reduce the cost of providing a government service;

(iv) Contribute substantially to public debate on an important policy issue; or

(v) Contribute substantially to matters of historical importance.

(d) Public benefit will not normally result:

(1) When the requested records will be used primarily for the personal benefit of an individual or group rather than the general public;

(2) When the requested records will be used primarily for a commercial purpose or financial benefit;

(3) When the requested records have already been made available, or are being made available in response to the request, for inspection and copying in the NRC Public Document Room or a Local Public Document Room;

(4) When the requested records will not add appreciably to the information already available to the public in the NRC Public Document Room or a Local Public Document Room;

(5) When the requested records consist primarily of technical data which will only be distributed or made available to the public by the requester without further analyses or comment;

(6) When the costs to the public outweigh any benefit which may accrue to the public.

(e) Based upon the information furnished by the requester in response to paragraph (c) and the criteria set forth in paragraph (d) of this section, and the NRC will determine if waiver or reduction of the fee is in the public interest because furnishing the information can be considered as primarily benefiting the general public. In determining whether to waive fees in whole

or in part, the NRC will consider the total estimated search and reproduction costs necessary to comply with the request and the extent to which the requester has carried the burden of making the necessary public interest showing under paragraph (c) of this section.

(f) In the absence of a specific request for waiver or reduction of fees, if the information furnished by the requester is sufficient to meet the requirements of this section for waiver or reduction of fees, NRC may determine that production or disclosure of the requested records can be considered as primarily benefiting the general public.

(g) The NRC will not waive the reproduction costs for documents located or made available in the NRC Public Document Room or a local public document room in the absence of a compelling reason to do so.

### § 9.14b Processing of requests for a waiver or reduction of fees\*

(a) Within 10 working days after receipt of a request for access to records which does not involve more than four hours of search time, or in which the NRC agrees to waive fees pursuant to § 9.14a(f), the NRC will respond to the request as provided in § 9.9. If the request is expected to require more than four hours of search time to locate the requested records and the NRC has not waived fees under § 9.14a(f), the NRC will notify the requester that fees will be assessed. The notification shall include the estimated cost of search fees and the nature of the search required. Requesters are encouraged to discuss with the NRC the possibility of narrowing the scope of the request while retaining the requester's original objective. The requester will be advised that he may agree to bear the estimated costs, submit a deposit equal to the estimated cost of complying with the request, or submit a request for waiver or reduction of fees pursuant to § 9.14a.

(b) Within 10 working days of the receipt of NRC's notice that fees will be assessed, the requester shall notify NRC in writing that he agrees to bear the estimated costs, submit a deposit equal to the estimated cost of responding to the request or submit a request for waiver or reduction of fees pursuant to § 9.14a. In making a request for waiver or reduction of fees, a requester must provide the information required by § 9.14a(c).

(c) Within 10 working days after receipt of a request for the waiver or reduction of fees made in accordance with § 9.14a, the NRC will waive or reduce the fees and notify the requester of the NRC's intent to promptly provide the records or will deny the re-

\* The application requirements contained in sections 9.14a(c) and 9.14b(d) have been approved by the U.S. General Accounting Office under number B-180225 (R0582).

# PART 20 • STANDARDS FOR PROTECTION AGAINST RADIATION

patients containing byproduct material provided that there are personnel in attendance who will take the precautions necessary to prevent the exposure of any individual to radiation or radioactive material in excess of the limits established in the regulations in this part.

(c) Caution signs are not required to be posted at areas or rooms containing radioactive materials for periods of less than eight hours provided that (1) the materials are constantly attended during such periods by an individual who shall take the precautions necessary to prevent the exposure of any individual to radiation or radioactive materials in excess of the limits established in the regulations in this part and; (2) such area or room is subject to the licensee's control.

(d) A room or other area is not required to be posted with a caution sign, and control is not required for each entrance or access point to a room or other area which is a high radiation area solely because of the presence of radioactive materials prepared for transport and packaged and labeled in accordance with regulations of the Department of Transportation.

## § 20.205 Procedures for picking up, receiving, and opening packages.

(a) (1) Each licensee who expects to receive a package containing quantities of radioactive material in excess of the Type A quantities specified in paragraph (b) of this section shall:

(i) If the package is to be delivered to the licensee's facility by the carrier, make arrangements to receive the package when it is offered for delivery by the carrier; or

(ii) If the package is to be picked up by the licensee at the carrier's terminal, make arrangements to receive notification from the carrier of the arrival of the package, at the time of arrival.

(2) Each licensee who picks up a package of radioactive material from a carrier's terminal shall pick up the package expeditiously upon receipt of notification from the carrier of its arrival.

(b) (1) Each licensee, upon receipt of a package of radioactive material, shall monitor the external surfaces of the package for radioactive contamination caused by leakage of the radioactive contents, except:

(i) Packages containing no more than the exempt quantity specified in the table in this paragraph;

(ii) Packages containing no more than 10 millicuries of radioactive material consisting solely of tritium, carbon-14, sulfur-35, or iodine-125;

(iii) Packages containing only radioactive material as gases or in special form;

(iv) Packages containing only radioactive material in other than liquid form (including Mo-99/Tc-99m generators) and not exceeding the Type A quantity limit specified in the table in this paragraph; and

(v) Packages containing only radionuclides with half-lives of less than 30

days and a total quantity of no more than 100 millicuries.

The monitoring shall be performed as soon as practicable after receipt, but no later than three hours after the package is received at the licensee's facility if received during the licensee's normal working hours, or eighteen hours if received after normal working hours.

(2) If removable radioactive contamination in excess of 0.01 microcuries (22,000 disintegrations per minute) per 100 square centimeters of package surface is found on the external surfaces of the package, the licensee shall immediately notify the final delivering carrier and, by telephone and telegraph, mailgram, or facsimile, the appropriate Nuclear Regulatory Commission Inspection and Enforcement Regional Office shown in Appendix D.

TABLE OF EXEMPT AND TYPE A QUANTITIES

| Transport group <sup>1</sup> | Exempt quantity limit (in millicuries) | Type A quantity limit (in curies) |
|------------------------------|----------------------------------------|-----------------------------------|
| I.....                       | .01                                    | 0.001                             |
| II.....                      | 0.1                                    | 0.050                             |
| III.....                     | 1                                      | 3                                 |
| IV.....                      | 1                                      | 20                                |
| V.....                       | 1                                      | 20                                |
| VI.....                      | 1                                      | 1000                              |
| VII.....                     | 25,000                                 | 1000                              |
| Special Form.....            | 1                                      | 20                                |

(c) (1) Each licensee, upon receipt of a package containing quantities of radioactive material in excess of the Type A quantities specified in paragraph (b) of this section, other than those transported by exclusive use vehicle, shall monitor the radiation levels external to the package. The package shall be monitored as soon as practicable after receipt, but no later than three hours after the package is received at the licensee's facility if received during the licensee's normal working hours, or 18 hours if received after normal working hours.

(2) If radiation levels are found on the external surface of the package in excess of 200 millirem per hour, or at three feet from the external surface of the package in excess of 10 millirem per hour,

the licensee shall immediately notify by telephone and telegraph, mailgram, or facsimile, the director of the appropriate NRC Regional Office listed in Appendix D, and the final delivering carrier.

(d) Each licensee shall establish and maintain procedures for safely opening packages in which licensed material is received, and shall assure that such procedures are followed and that due consideration is given to special instructions for the type of package being opened.

## § 20.206 Instruction of personnel.

Instructions required for individuals working in or frequenting any portion of a restricted area are specified in § 19.12 of this chapter.

<sup>1</sup> The definitions of "transport group" and "special form" are specified in § 71.4 of this chapter.

† Amended 41 FR 16445.

## § 20.204 Same: exceptions.

Notwithstanding the provisions of § 20.203,

(a) A room or area is not required to be posted with a caution sign because of the presence of a sealed source provided the radiation level twelve inches from the surface of the source container or housing does not exceed five millirem per hour.

(b) Rooms or other areas in hospitals are not required to be posted with caution signs, and control of entrance or access thereto pursuant to § 20.203(c) is not required, because of the presence of

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## § 20.207 Storage and control of licensed materials in unrestricted areas.

(a) Licensed materials stored in an unrestricted area shall be secured from unauthorized removal from the place of storage.

(b) Licensed materials in an unrestricted area and not in storage shall be tended under the constant surveillance and immediate control of the licensee.

### WASTE DISPOSAL

## § 20.301 General requirement.

No licensee shall dispose of licensed material except:

(a) By transfer to an authorized recipient as provided in the regulations in Part 30, 40, or 70 of this chapter, whichever may be applicable; or

(b) As authorized pursuant to § 20.302; or

(c) As provided in § 20.303, applicable to the disposal of licensed material by release into sanitary sewerage systems, or in § 20.106 (Radioactivity in effluents to unrestricted areas).

## § 20.302 Method for obtaining approval of proposed disposal procedures.

\*(a) Any licensee or applicant for a license may apply to the Commission for approval of proposed procedures to dispose of licensed material in a manner not otherwise authorized in the regulations in this chapter. Each application should include a description of the licensed material and any other radioactive material involved, including the quantities and kinds of such material and the levels of radioactivity involved, and the proposed manner and conditions of disposal. The application should also include an analysis and evaluation of pertinent information as to the nature of the environment, including topographical, geological, meteorological, and hydrological characteristics; usage of ground and surface waters in the general area; the nature and location of other potentially affected facilities; and procedures to be observed to minimize the risk of unexpected or hazardous exposures.

\*(b) The Commission will not approve any application for a license to receive licensed material from other persons for disposal on land not owned by the Federal government or by a State government.

(c) The Commission will not approve any application for a license for disposal of licensed material at sea unless the applicant shows that sea disposal offers less harm to man or the environment than other practical alternative methods of disposal.

## § 20.303 Disposal by release into sanitary sewerage systems.

No licensee shall discharge licensed material into a sanitary sewerage system unless:

(a) It is readily soluble or dispersible

in water; and

(b) The quantity of any licensed or other radioactive material released into the system by the licensee in any one

day does not exceed the larger of subparagraphs (1) or (2) of this paragraph:

(1) The quantity which, if diluted by the average daily quantity of sewage released into the sewer by the licensee, will result in an average concentration equal to the limits specified in Appendix B, Table I, Column 2 of this part; or

(2) Ten times the quantity of such material specified in Appendix C of this part; and

(c) The quantity of any licensed or other radioactive material released in any one month, if diluted by the average monthly quantity of water released by the licensee, will not result in an average concentration exceeding the limits specified in Appendix B, Table I, Column 2 of this part; and

(d) The gross quantity of licensed and other radioactive material released into the sewerage system by the licensee does not exceed one curie per year.

Excreta from individuals undergoing medical diagnosis or therapy with radioactive material shall be exempt from any limitations contained in this section.

## § 20.305 Treatment or disposal by incineration.

No licensee shall treat or dispose of licensed material by incineration except as specifically approved by the Commission pursuant to §§ 20.106(b) and 20.302.

### RECORDS, REPORTS, AND NOTIFICATION

## § 20.401 Records of surveys, radiation monitoring, and disposal.

(a) Each licensee shall maintain records showing the radiation exposures of all individuals for whom personnel monitoring is required under § 20.202 of the regulations in this part. Such records shall be kept on Form NRC-5, in accordance with the instructions contained in that form or on clear and legible records containing all the information required by Form NRC-5. The doses entered on the forms or records shall be for periods of time not exceeding one calendar quarter.

(b) Each licensee shall maintain records in the same units used in this part, showing the results of surveys required by §§ 20.301(b), monitoring required by §§ 20.205(b) and 20.205(c), and disposals made under §§ 20.302, 20.303, and deleted § 20.304.<sup>1</sup>

(c) (1) Records of individual exposure to radiation and to radioactive material which must be maintained pursuant to the provisions of paragraph (a) of this section and records of disposals, includ-

ing results of whole body counting examinations, made pursuant to § 20.108, shall be preserved until the Commission authorizes disposition.

(2) Records of the results of surveys and monitoring which must be maintained pursuant to paragraph (b) of this section shall be preserved for two years after completion of the survey except that the following records shall be maintained until the Commission authorizes their disposition: (i) records of the results of surveys to determine compliance with § 20.103(a); (ii) in the absence of personnel monitoring data, records of the results of surveys to determine external radiation dose; and (iii) records of the results of surveys used to evaluate the release of radioactive effluents to the environment.

(3) Records of disposal of licensed material made pursuant to §§ 20.302, 20.303, and deleted § 20.304<sup>1</sup> are to be maintained until the Commission authorizes their disposition.

(4) Records which must be maintained pursuant to this part may be the original or a reproduced copy or microform if such reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified by Commission regulations.

(5) If there is a conflict between the Commission's regulations in this part, license condition, or technical specification, or other written Commission approval or authorization pertaining to the retention period for the same type of record, the retention period specified in the regulations in this part for such records shall apply unless the Commission pursuant to § 20.501, has granted a specific exemption from the record retention requirements specified in the regulations in this part.

## § 20.402 Reports of theft or loss of licensed material.

(a) Each licensee shall report by telephone† to the Director of the appropriate Nuclear Regulatory Commission of the appropriate Nuclear Regulatory Commission Inspection and Enforcement Regional Office listed in Appendix D, immediately after its occurrence becomes known to the licensee, any loss or theft of licensed material in such quantities and under such circumstances that it appears to the licensee that a substantial hazard may result to persons in unrestricted areas.

(b) Each licensee who is required to make a report pursuant to paragraph (a) of this section shall, within thirty (30) days after he learns of the loss or theft, make a report in writing to the appropriate NRC Regional Office listed in Appen-

<sup>1</sup> Section 20.304 provided for burial of small quantities of licensed materials in soil. Notice of its deletion appears in the Federal Register of October 30, 1980 (45 FR ———).

† Amended 42 FR 43965.

\* Redesignated 36 FR 23138.



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| APPENDIX C         |             |
|--------------------|-------------|
| Material           | Microcuries |
| Americium-241      | 0.1         |
| Antimony-122       | 100         |
| Antimony-124       | 10          |
| Antimony-125       | 10          |
| Arsenic-73         | 100         |
| Arsenic-74         | 10          |
| Arsenic-76         | 10          |
| Arsenic-77         | 100         |
| Barium-131         | 10          |
| Barium-133         | 10          |
| Barium-140         | 10          |
| Bismuth-210        | 1           |
| Bromine-82         | 10          |
| Cadmium-109        | 10          |
| Cadmium-115m       | 10          |
| Cadmium-115        | 100         |
| Calcium-45         | 10          |
| Calcium-47         | 10          |
| Carbon-14          | 100         |
| Cerium-141         | 100         |
| Cerium-143         | 100         |
| Cerium-144         | 1           |
| Cesium-131         | 1,000       |
| Cesium-134m        | 100         |
| Cesium-134         | 1           |
| Cesium-135         | 10          |
| Cesium-136         | 10          |
| Cesium-137         | 10          |
| Chlorine-36        | 10          |
| Chlorine-38        | 10          |
| Chromium-51        | 1,000       |
| Cobalt-58m         | 10          |
| Cobalt-58          | 10          |
| Cobalt-60          | 1           |
| Copper-64          | 100         |
| Dysprosium-165     | 10          |
| Dysprosium-166     | 100         |
| Erbium-169         | 100         |
| Erbium-171         | 100         |
| Europium-152 9.2 h | 100         |
| Europium-152 13 yr | 1           |
| Europium-154       | 1           |
| Europium-155       | 10          |
| Fluorine-18        | 1,000       |
| Gadolinium-153     | 10          |
| Gadolinium-159     | 100         |
| Gallium-72         | 10          |
| Germanium-71       | 100         |
| Gold-198           | 100         |
| Gold-199           | 100         |
| Hafnium-181        | 10          |
| Holmium-166        | 100         |
| Hydrogen-3         | 1,000       |
| Indium-113m        | 100         |
| Indium-114m        | 10          |
| Indium-115m        | 100         |
| Indium-115         | 10          |
| Iodine-125         | 1           |
| Iodine-126         | 1           |
| Iodine-129         | 0.1         |
| Iodine-131         | 1           |
| Iodine-132         | 10          |
| Iodine-133         | 1           |
| Iodine-134         | 10          |
| Iodine-135         | 10          |
| Iridium-192        | 10          |
| Iridium-194        | 100         |
| Iron-55            | 100         |
| Iron-59            | 10          |
| Krypton-85         | 100         |
| Krypton-87         | 10          |
| Lanthanum-140      | 10          |
| Lutetium-177       | 100         |
| Manganese-52       | 10          |
| Manganese-54       | 10          |
| Manganese-56       | 10          |
| Mercury-197m       | 100         |
| Mercury-197        | 100         |
| Mercury-203        | 10          |
| Molybdenum-99      | 100         |
| Neodymium-147      | 100         |
| Neodymium-149      | 100         |
| Nickel-59          | 100         |
| Nickel-63          | 10          |
| Nickel-65          | 100         |
| Niobium-93m        | 10          |
| Niobium-95         | 10          |
| Niobium-97         | 10          |
| Osmium-185         | 10          |

| Material                         | Microcuries |
|----------------------------------|-------------|
| Osmium-191m <sup>1</sup>         | 100         |
| Osmium-191                       | 100         |
| Osmium-193                       | 100         |
| Palladium-103                    | 100         |
| Palladium-109                    | 100         |
| Phosphorus-32                    | 10          |
| Platinum-191                     | 100         |
| Platinum-193m                    | 100         |
| Platinum-193                     | 100         |
| Platinum-197m                    | 100         |
| Platinum-197                     | 100         |
| Plutonium-239                    | 0.1         |
| Polonium-210                     | 0.1         |
| Potassium-42                     | 10          |
| Praseodymium-142                 | 100         |
| Praseodymium-143                 | 100         |
| Promethium-147                   | 10          |
| Promethium-149                   | 10          |
| Radium-226                       | 0.1         |
| Rhenium-186                      | 100         |
| Rhenium-188                      | 100         |
| Rhodium-103m                     | 100         |
| Rhodium-105                      | 100         |
| Rubidium-86                      | 10          |
| Rubidium-87                      | 10          |
| Ruthenium-97                     | 100         |
| Ruthenium-103                    | 10          |
| Ruthenium-105                    | 10          |
| Ruthenium-106                    | 1           |
| Samarium-151                     | 10          |
| Samarium-153                     | 100         |
| Scandium-46                      | 10          |
| Scandium-47                      | 100         |
| Scandium-48                      | 10          |
| Selenium-75                      | 10          |
| Silicon-31                       | 100         |
| Silver-105                       | 10          |
| Silver-110m                      | 1           |
| Silver-111                       | 100         |
| Sodium-24                        | 10          |
| Strontium-85                     | 10          |
| Strontium-89                     | 1           |
| Strontium-90                     | 0.1         |
| Strontium-91                     | 10          |
| Strontium-92                     | 10          |
| Sulphur-35                       | 100         |
| Tantalum-182                     | 10          |
| Technetium-96                    | 10          |
| Technetium-97m                   | 100         |
| Technetium-97                    | 100         |
| Technetium-99m                   | 100         |
| Technetium-99                    | 10          |
| Tellurium-125m                   | 10          |
| Tellurium-127m                   | 10          |
| Tellurium-127                    | 100         |
| Tellurium-129m                   | 10          |
| Tellurium-129                    | 100         |
| Tellurium-131m                   | 10          |
| Tellurium-132                    | 10          |
| Terbium-160                      | 10          |
| Thallium-200                     | 100         |
| Thallium-201                     | 100         |
| Thallium-202                     | 100         |
| Thallium-204                     | 10          |
| **Thorium (natural) <sup>1</sup> | 100         |
| Thulium-170                      | 10          |
| Thulium-171                      | 10          |
| Tin-113                          | 10          |
| Tin-125                          | 10          |
| Tungsten-181                     | 10          |
| Tungsten-185                     | 10          |
| Tungsten-187                     | 100         |
| **Uranium (natural) <sup>2</sup> | 100         |
| Uranium-233                      | 0.1         |
| Uranium-234                      | 0.1         |
| Uranium-235                      | 0.1         |
| Vanadium-48                      | 10          |
| Xenon-131m                       | 1,000       |
| Xenon-133                        | 100         |
| Xenon-135                        | 100         |
| Ytterbium-175                    | 100         |
| Yttrium-90                       | 10          |
| Yttrium-91                       | 10          |
| Yttrium-92                       | 100         |
| Yttrium-93                       | 100         |
| Zinc-65                          | 10          |
| Zinc-69m                         | 100         |
| Zinc-69                          | 1,000       |
| Zirconium-93                     | 10          |
| Zirconium-95                     | 10          |
| Zirconium-97                     | 10          |

Any alpha emitting radionuclide not listed above or mixtures of alpha emitters of unknown composition

Any radionuclide other than alpha emitting radionuclides, not listed above or mixtures of beta emitters of unknown composition

Note.—For purposes of § 20.303, where there is involved a combination of isotopes in known amounts, the limit for the combination should be derived as follows. Determine, for each isotope in the combination, the ratio between the quantity present in the combination and the limit otherwise established for the specific isotope when not in combination. The sum of such ratios for all the isotopes in the combination may not exceed "1" (i.e., "unity").

<sup>1</sup> Based on alpha disintegration rate of Th-232, Th-230 and their daughter products.

<sup>2</sup> Based on alpha disintegration rate of U-238, U-234, and U-235.

\* Amended 36 FR 16898.

\*\* Amended 39 FR 23990.

# PART 20 • STANDARDS FOR PROTECTION AGAINST RADIATION

## Appendix D

### UNITED STATES NUCLEAR REGULATORY COMMISSION INSPECTION AND ENFORCEMENT REGIONAL OFFICES

| Region                                                                                                                                                             | Address                                                                                                                        | Telephone            |                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|
|                                                                                                                                                                    |                                                                                                                                | Daytime              | Nights and Holidays  |
| I<br>Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont     | Region I, USNRC<br>Office of Inspection and Enforcement<br>631 Park Avenue<br>King of Prussia, Pa. 19406                       | ‡<br>(215) 337-5000  | ‡<br>(215) 337-5000  |
| II<br>Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, ***<br>Puerto Rico, South Carolina, Tennessee, Virginia, Virgin Islands, and West Virginia | † Region II, USNRC<br>Office of Inspection and Enforcement<br>101 Marietta Street<br>Suite 3100<br>Atlanta, Georgia 30303      | *<br>(404) 221-4503  | *<br>(404) 221-4503  |
| III<br>Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin                                                                                 | Region III, USNRC<br>Office of Inspection and Enforcement<br>799 Roosevelt Road<br>Glen Ellyn, Ill. 60137                      | **<br>(312) 932-2500 | **<br>(312) 932-2500 |
| IV<br>Arkansas, Colorado, Idaho, Kansas, Louisiana, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, and Wyoming                  | Region IV, USNRC<br>Office of Inspection and Enforcement<br>611 Ryan Plaza Drive<br>Suite 1000<br>Arlington, Texas 76012       | (817) 334-2841       | (817) 334-2841       |
| V<br>Alaska, Arizona, California, Hawaii, Nevada, Oregon, Washington, and U.S. territories and possessions in the Pacific                                          | Region V, USNRC<br>Office of Inspection and Enforcement<br>1990 N. California Blvd.<br>Suite 202<br>Walnut Creek, Calif. 94596 | **<br>(415) 943-3700 | **<br>(415) 943-3700 |

40 FR 42557

\*Amended 41 FR 55851.

†Amended 43 FR 32741.

‡ Amended 43 FR 52201.

\*\* Amended 44 FR 63515.

\*\*\* Amended 45 FR 18905

UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

**PART  
25**

**ACCESS AUTHORIZATION FOR LICENSE PERSONNEL**

NOTE: Effective Date of Parts 25 and 95 is changed from 5/19/80 to 10/1/80 (45 FR 45256).

**General Provisions**

Sec.

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**Access Authorizations**

- 25.15 Access Permitted Under "Q" or "L" Access Authorization.
- 25.17 Approval for Processing Applicants for Access Authorization.
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- 25.21 Determination of Initial and Continued Eligibility for Access Authorization.
- 25.23 Notification of Grant of Access Authorization.
- 25.25 Cancellation of Requests for Access Authorization.
- 25.27 Reopening of Cases in Which Requests for Access Authorizations Are Cancelled.
- 25.29 Reinstatement of Access Authorization.
- 25.31 Extensions and Transfers of Access Authorizations.
- 25.33 Termination of Access Authorizations.

**Violations**

- 25.35 Violations.

**Classified Visits**

- 25.37 Classified Visits.

Authority: Secs. 145, 161(i), Pub. L. 93-703, 68 Stat. 942, as amended, 948, as amended.

(42 U.S.C. 2165, 2201); sec. 201(f), Pub. L. 93-438, 86 Stat. 1243 (42 U.S.C. 5841); E.O. 10865, and E.O. 12065

**General Provisions**

**§ 25.1 Purpose.**

This part establishes procedures for granting, reinstating, extending, transferring and terminating access authorizations of licensee personnel, licensee contractors or agents and other persons (e.g. individuals involved in adjudicatory procedures as set forth in 10 CFR Part 2, Subpart I) who may require access to information classified at the Secret and Confidential National Security Information and/or Restricted Data level.

**§ 25.3 Scope.**

The regulations in this part apply to licensees and others who may require access to National Security Information and/or Restricted Data related to a license or application for a license.

**§ 25.5 Definitions.**

"Access Authorization" is an administrative determination by the Commission that an individual (including a consultant) who is employed by or an applicant for employment with Commission contractors, licensee contractors, agents, or licensees of the Commission or any other individual designated by the Executive Director for Operations is eligible for access to National Security Information and/or Restricted Data; and an individual (including a consultant) who is a Commission employee or applicant for Commission employment is eligible for security clearance.

"Act" means the Atomic Energy Act of 1954 (68 Stat. 919), as amended.

"Commission" means the Nuclear Regulatory Commission or its duly authorized representatives.

"L" access authorization means an access authorization granted by the Commission which is normally based on a National Agency Check (NAC) or NAC and Inquiry (NACI) conducted by the Office of Personnel Management.

"License" means a license issued pursuant to 10 CFR Part 50 or Part 70.

"Matter" means documents or material.

"National Security Information" means information or matter that is owned by, produced for or by, or under the control of, the United States Government, and that has been determined pursuant to Executive Order 12065 or prior orders to require protection against unauthorized disclosure and is so designated.

"Need-to-know" means a determination by persons having responsibility for classified information or matter, that a proposed recipient's access to such classified information or matter is necessary in the performance

of his official, contractual, or licensee duties of employment under the cognizance of the Commission.

"Person" means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, government agency other than the Commission or the Department of Energy (DOE), except that the DOE shall be considered a person to the extent that its facilities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974 and sections 104, 105 and 202 of the Uranium Mill Tailings Radiation Control Act of 1978, any State or any political subdivision of, or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing.

"Q" Access Authorization means an access authorization granted by the Commission based on a full field investigation conducted by the Office of Personnel Management, the Federal Bureau of Investigation, or other U.S. Government agency which conducts personnel security investigations.

"Restricted Data" means all data concerning design, manufacture or utilization of atomic weapons, the production of special nuclear material, or the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to Section 142 of the Act.

**§ 25.7 Interpretations.**

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

## PART 25 • ACCESS AUTHORIZATION FOR LICENSE PERSONNEL

### § 25.9 Communications.

Except where otherwise specified, all communications and reports concerning the regulations in this part should be addressed to the Director, Division of Security, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

### § 25.11 Specific exemptions.

The Commission may, upon application of any interested party, grant an exemption from the requirements of this Part 25. Exemptions will be granted only if they are authorized by law and will not constitute an undue risk to the common defense and security. Documentation related to the request, notification and processing of an exemption shall be maintained for two years beyond the period covered by the exemption.

### § 25.13 Records maintenance.

Each licensee or organization employing individuals approved for personnel security access authorization under this part, shall maintain records as prescribed within the part. These records shall be subject to review and inspection by NRC representatives during security surveys.

### Access Authorizations

#### § 25.15 Access permitted under "Q" or "L" access authorization.

(a) A "Q" access authorization permits an individual access on a need-to-know basis to (1) Secret and Confidential Restricted Data and (2) Secret and Confidential National Security Information including intelligence information, CRYPTO (i.e., cryptographic information) or other classified communications security (COMSEC) information.

(b) An "L" access authorization permits an individual access on a need-to-know basis to Confidential Restricted Data and Secret and Confidential National Security Information other than the categories specifically included in paragraph (a) of this section.

(c) Each employee of the Commission has a security clearance consisting of one of the two levels of access authorization. Licensees and other persons will furnish National Security Information and/or Restricted Data to a Commission employee on official business when the employee has the appropriate level of NRC security clearance and need-to-know. An "L" access authorization does not permit an NRC employee access to Restricted Data.

#### § 25.17 Approval for processing applicants for access authorization.

(a) Access authorization shall be requested for licensee employees or other persons (e.g., 10 CFR Part 2,

Subpart I) who need access to National Security Information and/or Restricted Data in connection with activities under Parts 50 or 70.

(b) The request shall include a completed personnel security packet (see § 25.17(c)) and request form (NRC-237) signed by a licensee or licensee contractor official which identifies: The person for whom access authorization is requested; his date of birth; the level of access authorization needed ("Q" or "L"); and the activity for which access is required.

(c) Each personnel security packet so submitted, shall include the following completed forms:

(1) Personnel Security Questionnaire, (NRC-1, Parts I and II);

(2) National Agency Check-Data for Nonsensitive or Noncritical-Sensitive Position (SF-85A)—for "L" cases only;

(3) Two Standard Fingerprint cards, (FD-258);

(4) Security Acknowledgment, (NRC-176);

(5) Authority to Release Information, (NRC-259); and

➤ (6) Related forms where specified in accompanying instructions (NRC-254 and NRC-254A).

Forms identified in paragraphs (c) (1) and (2) of this section must be typed. Only a Security Acknowledgment (NRC Form 176) need be completed by any person possessing an active access authorization or in processing for an access authorization prior to the effective date of this rule. The access authorizations must be at an equivalent level to those required by NRC and granted or processed by another Federal agency.

➤ (d) To avoid delays in processing requests for access authorizations, each security packet should be reviewed for completeness and correctness (including legibility of response on the forms) prior to submittal.

➤ (e) Applications for access authorization processing must be accompanied by a check or money

order, payable to the United States Nuclear Regulatory Commission, representing the current cost for the processing of each "Q" and "L" access authorization request. Access authorization fees will be published in December of each year and will be applicable to each access authorization request received during the following calendar year. Applications from individuals having current Federal access authorizations may be processed expeditiously at less cost, since the Commission may accept the certification of access authorizations and investigative data from other Federal Government agencies which grant personnel access authorizations.

### § 25.19 Processing applications.

Each application for access authorization together with its accompanying fee shall be submitted to the NRC Division of Security. If necessary the NRC Division of Security may obtain approval from the appropriate Commission office exercising licensing or regulatory authority before processing the access authorization request.

If the applicant is disapproved for processing, the NRC Division of Security will notify the submitter in writing and will return the original application (security packet) and its accompanying fee.

### § 25.21 Determination of initial and continued eligibility for access authorization.

(a) Following receipt by the NRC Division of Security of the reports of the personnel security investigations, the record will be reviewed to determine that granting an access authorization will not endanger the common defense and security and is clearly consistent with the national interest. If such a determination is made, access authorization will be granted. Questions as to initial eligibility, and any subsequent developments that raise a question of continued eligibility for access authorization will be determined in accordance with Part 10 of Chapter I.

(b) The NRC Division of Security shall be promptly notified of developments which bear on continued eligibility for access authorization throughout the period for which the authorization is active (e.g., persons who marry subsequent to the completion of a personnel security packet must report this change by submitting a completed form entitled "Data Report on Spouse").

### § 25.23 Notification of grant of access authorization.

The determination to grant access authorization will be furnished in



## PART 25 • ACCESS AUTHORIZATION FOR LICENSE PERSONNEL

writing to the licensee or organization which initiated the request. Records of these notifications must be maintained by the licensee or requesting organization for one year after the access authorization has been terminated by the NRC Division of Security. This information may also be furnished to other representatives of the Commission, to licensees, contractors, or other Federal agencies. Notifications of access authorization will not be given in writing to the individual himself except:

(1) In those cases in which the determination was made as a result of a Personnel Security Board or a Personnel Security Review Board hearing, or

(2) When the individual also is the official designated by the licensee to whom written NRC notifications are forwarded.

### § 25.25 Cancellation of requests for access authorization.

When a request for an individual's access authorization is withdrawn or cancelled, the NRC Division of Security will be notified by the requestor immediately by telephone so that the full field investigation or National Agency Check may be discontinued. The caller will supply the full name and date of birth of the individual, the date of request, and the type of access authorization originally requested ("Q" or "L"). Such telephone notice shall be promptly confirmed in writing.

### § 25.27 Reopening of cases in which requests for access authorizations are cancelled.

(a) In conjunction with a new request for access authorization for individuals whose cases were previously cancelled, new fingerprint cards in duplicate and a new Security Acknowledgment shall be furnished to the NRC Division of Security along with the request.

(b) Additionally, if six months or more have elapsed since the date of the last Personnel Security Questionnaire, a complete personnel security packet (see § 25.17 (c)) shall be executed by the individual. The NRC Division of Security, based on investigative or other needs, may require a complete personnel security packet in other cases as well. A fee, equal to the amount paid for an initial request, will be charged only if a new or updating investigation is required.

### § 25.29 Reinstatement of access authorization.

An up-to-date personnel security packet will be furnished with a request for reinstatement of an access authorization if 6 months or more have elapsed since termination of access authorization and a year or more has elapsed since the date of the previous

Personnel Security Questionnaire, or if any significant changes are known to have occurred since the termination. A new Security Acknowledgment will be obtained in all cases. Where personnel security packets are not required, a request for reinstatement shall state the level of access authorization to be reinstated and the full name and date of birth of the individual in order to establish positive identification. A fee, equal to the amount paid for an initial request, will be charged only if a new or updating investigation is required.

### § 25.31 Extensions and transfers of access authorizations.

(a) The NRC Division of Security may, on request, extend the authorization of an individual who possesses an access authorization in connection with a particular employer or activity, to permit access to National Security Information and/or Restricted Data in connection with an assignment with another employer or activity.

(b) The NRC Division of Security may, on request, transfer an access authorization when an individual's access authorization under one interest is terminated, simultaneously with his being granted access authorization for another employer or activity.

(c) Requests for extension or transfer of access authorization shall state the full name of the person, his date of birth and level of access authorization. The Director, Division of Security, may require a new personnel security packet (see § 25.17(c)) to be completed by the applicant. A fee, equal to the amount paid for an initial request, will be charged only if a new or updating investigation is required.

### § 25.33 Termination of access authorizations.

(a) Access authorizations will be terminated when:

(1) Access authorization is no longer required, or

(2) An individual is separated from the employment or the activity for which he obtained an access authorization for a period of 90 days or more, or

(3) An individual, pursuant to 10 CFR Part 10, is no longer eligible for access authorization.

(b) A representative of the licensee or other organization which employs the individual whose access authorization will be terminated shall immediately notify the NRC Division of Security when the circumstances noted in paragraphs (a)(1) or (a)(2) of this section exist; inform the individual that his access authorization is being terminated, and the reason; and that he will be considered for reinstatement of access authorization if he resumes work requiring it.

(c) When an access authorization is to be terminated, a representative of the licensee or other organization shall conduct a security termination briefing of the individual involved, explain the Security Termination Statement (NRC Form 136) and have the individual execute the form. The official shall notify the NRC Division of Security promptly in writing that a briefing was conducted and forward the original copy of the executed Security Termination Statement to the Division of Security.

### Violations

#### § 25.35 Violations.

An injunction or other court order may be obtained prohibiting any violation of any provision of the Act or any regulation or order issued thereunder. Additionally, National Security Information is protected pursuant to the requirements and sanctions of E.O. 12065. In addition any person who willfully violates these provisions may be guilty of a crime, and upon conviction, may be punished by fine or imprisonment or both, as provided by law.

### Classified Visits

#### § 25.37 Classified visits.

Visits to NRC, NRC contractor, licensee or licensed related facilities, or other government agencies and their contractors involving access to classified information by individuals covered by this Part require advance certification of "need-to-know" and verification of NRC access authorization. Individuals planning such visits shall complete NRC Form 277, "Request for Visit or Access Approval," with the "need-to-know" certified by the appropriate Commission Office exercising licensing or regulatory authority. This Commission office shall then forward the request to the NRC Division of Security at least 15 days in advance of the date of the visit for appropriate verification of NRC access authorization. The Division of Security shall forward the form to the facility to be visited.

### Appendix A to Part 25—Fees for NRC Access Authorization

| Category                                          | Fee   |
|---------------------------------------------------|-------|
| Initial "L" Access Authorization                  | \$15  |
| Reinstatement of "L" Access Authorization         | "15   |
| Extension or Transfer of "L" Access Authorization | "15   |
| Initial "Q" Access Authorization                  | \$100 |
| Reinstatement of "Q" Access Authorization         | "100  |
| Extension or Transfer of "Q"                      | "100  |

\*Full fee will only be charged if investigation is required



## PART 30 • PROPOSED RULE MAKING

well-logging source involved, including radionuclide, quantity, chemical, and physical form;

(3) Surface location and identification of well;

(4) Results of efforts to immobilize and seal the source in place;

(5) Depth of source;

(6) Depth of the top of the cement plug;

(7) Depth of well;

(8) Any other information (e.g., warning statement) contained on permanent identification plaque;

(9) Notifications made to State agencies, and

(10) A brief description of the attempted recovery efforts.

(d) Any licensee or applicant for a license may apply to the Commission for approval of proposed methods to be used in lieu of any of the requirements of paragraphs (a), (b), and (c) of this section for an irretrievable well-logging source.

44 FR 70408

Published 12/6/79

Comment period expires 3/3/80

*Disposal of High-Level Radioactive Wastes in Geologic Repositories; Proposed Licensing Procedures*

See Part 60 Proposed Rule Making.

45 FR 13739

Published 3/3/80

Comment period expires May 2, 1980

*Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions and Related Conforming Amendments*

See Part 51 Proposed Rule Making.

45 FR 15184

Published 3/10/80

Comment period expires 5/9/80

*Protection of Employees Who Provide Information*

See Part 19 Proposed Rule Making

➤ 45 FR 70874

Published 10/27/80

Comment period expires 12/11/80

10 CFR Parts 30, 32, 70, and 150

**Exemption of Technetium-99 and Low-Enriched Uranium as Residual Contamination in Smelted Alloys**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The Nuclear Regulatory Commission is considering amending its regulations to exempt from licensing and regulatory requirements technetium-99 and low-enriched uranium as residual contamination in any smelted alloy. The Commission is also proposing requirements for issuing specific licenses to persons desiring to smelt scrap or to initially transfer smelted alloys containing technetium-99 or low-enriched uranium as a residual contamination. The Commission is proposing these rule changes in response to a Department of Energy request to amend the Commission's present specific licensing requirements that have the effect of inhibiting trade in metal scrap contaminated with small amounts of these two radioactive materials.

**DATES:** Comment period expires December 11, 1980. Comments received after December 11, 1980 will be considered if it is practical to do so, but assurance of consideration cannot be given except as to comments filed on or before.

**ADDRESSES:** All interested persons who desire to submit written comments or suggestions for consideration in connection with the proposed amendments and draft environmental impact statement should send them to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of correspondence cited below and comments on the proposed amendments and draft environmental impact statement may be examined at the Commission's Public Document Room at 1717 H Street NW., Washington, D.C.

**FOR FURTHER INFORMATION CONTACT:** Mr. J. J. Henry, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (301-443-5946).

**SUPPLEMENTARY INFORMATION:** Under current NRC regulations, no person may possess, use, or transfer technetium-99 or low-enriched uranium (defined in 10 CFR 70.51(a)(2) as that uranium whose isotope content is less than 20 percent uranium-235 by weight) as contaminants in metals except as authorized in a specific license issued by the NRC pursuant to 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material," or 10 CFR Part 70, "Domestic Licensing of Special Nuclear Materials," as appropriate. The effect of the requirements for specific licenses has been to inhibit trade in metal scrap

contaminated with small amounts of these two radioactive materials and prevent recycling by the secondary metals industry of smelted alloys containing these two radioactive materials as residual contamination.

### Rulemaking Initiation

The Department of Energy has underway Cascade Improvement Programs and Cascade Upgrading Programs begun by the AEC at all three U.S. uranium enrichment plants—Oak Ridge, TN, Portsmouth, OH, and Paducah, KY. In the early 1970s, a market survey showed that no scrap dealers or processors would purchase any of the metal scrap generated by the programs if their customers would be required to hold specific licenses to possess or use recycled contaminated scrap.

Without relief from requirements for licenses, sizeable quantities of enrichment plant scrap—31,800 metric tons of iron and steel, 8,400 metric tons of nickel, and 1,600 metric tons of copper—would have to be treated as radioactive waste and buried by 1981 instead of being sold for tens of millions of dollars.

Based on these and other factors, the Director, Division of Waste Management and Transportation, AEC, by memorandum dated February 12, 1974, requested the assistance of the Director, Directorate of Regulatory Standards, AEC, in establishing a de minimis quantity for enriched uranium in scrap metal. The memorandum of response dated March 28, 1974, noted impending legislation to amend the Atomic Energy Act of 1954 to authorize AEC to exempt special nuclear material and suggested coordination so that language of any proposed exemption would be consistent with the legislation.

In the spring of 1974, L. Rogers, Director of Regulatory Standards, Atomic Energy Commission, presented a statement before the Joint Committee on Atomic Energy, U.S. Congress supporting an amendment of section 57 of the Atomic Energy Act of 1954 to give authority to exempt small quantities of special nuclear material to the former Atomic Energy Commission, the predecessor of the Nuclear Regulatory Commission. In his testimony, Mr. Rogers stated:

... Equipment and materials in the nuclear industry are sometimes contaminated with levels of special nuclear material which cannot practically be removed but which are low enough that they do not constitute a radiation safety problem. An exemption from licensing of such special nuclear material would allow the reuse of recycling of the contaminated equipment and materials in an economic manner which would also conserve resources, rather than requiring the otherwise unnecessary controlled disposal of such contaminated equipment and materials as radioactive wastes.

## PART 30 • PROPOSED RULE MAKING

After further consideration and data collection, the Energy Research and Development Administration (a successor of AEC) by letter dated September 8, 1976, transmitted to NRC an environmental impact assessment in which ERDA proposed: (1) An exemption of smelted metal contaminated with uranium enriched up to 20% uranium-235 providing the total uranium content in the metal does not exceed 17.5 parts per million; and (2) The addition of technetium-99 at a concentration of  $8.6 \times 10^{-2}$  microcuries/gram (equivalent to 5 parts per million) to Column II, Schedule A, 10 CFR 30.70, "Exempt Concentrations."

By letter dated July 9, 1979, the Department of Energy indicated the department's continued need or regulations to allow the sale of metal scrap contaminated with de minimis quantities of enriched uranium and technetium-99.

### Proposed Action

The Commission is proposing to exempt from licensing and regulatory requirements any person who receives, possesses, uses, or transfers technetium-99 or low-enriched uranium as a residual contamination in any smelted alloys. The technetium-99 and low-enriched uranium would be minor constituents less than 5 parts per million and 17.5 parts per million, respectively, of representative samples of smelted alloy products.

The proposed exemptions would not authorize the transfer of smelted alloy containing byproduct material other than technetium-99 as residual contamination, source material, other than low-enriched uranium as residual contamination. In that event, the smelted alloy would also have to be exempt from the other applicable licensing and regulatory requirements of 10 CFR Parts 30-35, 40, and 70 to be transferred for use under the proposed exemptions.

Persons who smelt scrap contaminated with technetium-99 or low-enriched uranium or persons who initially transfer for sale or distribution smelted alloys containing technetium-99 or low-enriched uranium as residual contamination in the smelted alloys would not be exempt from requirements for specific licenses authorizing transfer to exempt persons. This means, among other things, that the slag produced by licensed smelters would be subject to specific licensing controls with regard to transfer of byproduct material (10 CFR 30.41) and special nuclear material (10 CFR 70.42). It is expected that slag from scrap generated at Department of Energy facilities would be returned to

the Department of Energy for ultimate disposal. Slag from scrap generated at NRC licensed facilities would be disposed of in a safe manner, for example by transfer to commercial firms to the extent specific services and volumes are available for disposal of such low-level radioactive waste.

### Basis for Technetium-99 Limit

The major source of technetium compounds and mixtures stems from the fission of uranium-235. Among the most important of the technetium isotopes is technetium-99, which exhibits a high fission yield from uranium-235 of 6.2 percent and a long half-life of 210,000 years. The nature of technetium is such that in the presence of hydrogen fluoride it forms volatile compounds and thereby becomes a trace contaminant of uranium hexafluoride.

Feed material specifications, published by the U.S. Department of Energy for uranium hexafluoride delivered to uranium enrichment plants, control the content of technetium-99 in the feed material by a specification on maximum beta particle radiation which allows a maximum beta activity of only 10 percent of the beta activity of aged natural uranium.

During the enrichment process, technetium deposits on all materials that come in contact with uranium hexafluoride. In the case of scrap metal generated in the Cascade Improvement Program and Cascade Upgrading Program, the combination of feed material specification, deposition rates, and mechanical and chemical decontamination results in scrap metal contaminated with a maximum of 5 parts per million technetium-99.

There is essentially no removal of technetium from metal during smelting processes. Therefore, the Commission is proposing for technetium-99 a concentration limit of 5 parts per million which is achievable by mechanical and chemical decontamination techniques prior to smelting scrap metal.

### Basis for Uranium Limit

Because the proposed amendments of Part 70 involve special nuclear material, the Commission is proposing to base the uranium element concentration limit on the concentration of the uranium-235 isotope in the smelted alloys. By specifying that the uranium be low-enriched uranium (uranium whose isotope content is less than 20 percent uranium-235 by weight) at a maximum concentration of 17.5 parts per million uranium element in smelted alloys, the Commission is proposing to place a maximum concentration limit of 3.5 parts per million for uranium-235 in

smelted alloys. This is consistent with the uranium-235 concentration in any alloy that is exempt under paragraph (a) of 10 CFR 40.13, "Unimportant Quantities of Source Material." The alloy is exempt if it contains less than 0.05 percent by weight source material which includes uranium whose isotope content is 0.711 percent or less of uranium-235 by weight.

The Commission is proposing that the low-enriched uranium be residual contamination in smelted alloys. Based on this and the other factors set out above, the Commission considers the low-enriched uranium would be diluted in such a way that it would no longer be usable for any nuclear activity relevant from the point of view of safeguards and would be practically irrecoverable.

### Specific Licensing Conditions

The requirements for specific licenses to smelt scrap or to initially transfer smelted alloys containing technetium-99 or low-enriched uranium specify that the applicant must submit a description of decontamination and smelting procedures, sampling procedures, and analytical procedures.

The proposed amendments, in effect, will make the persons initially transferring smelted alloys responsible for assuring that such alloys meet the specifications set out in proposed 10 CFR 30.21 and/or 10 CFR 70.15. The specifically licensed person who smelts scrap or initially transfers smelted alloys must be able to certify to any interested person that the smelted alloy initially transferred has been smelted, sampled, and analyzed using procedures sufficient to provide reasonable assurance that the technetium-99 or low-enriched uranium is residual contamination in the smelted alloy in which the technetium-99 or low-enriched uranium are minor constituents less than 5 parts per million or 17.5 parts per million, respectively, of representative samples of billets, ingots, or other smelted alloy products. (The Department of Energy, and certain of its contractors, are exempt from licensing and could therefore make transfers to exempt persons without specific NRC authorization. The Commission relies upon the Department to establish internal control procedures that will assure that the contamination levels of smelted scrap which it transfers are within the limits set forth in these rules.)

The requirement for a specific license to smelt scrap is not intended to require a specific license to recycle any material from smelted alloys. Subsequent possession, use, transfer, and disposal of the technetium-99 and low-enriched uranium in resmelted alloys, the



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resulting slag, and new products by all other persons would be exempted from licensing and regulatory requirements of the Commission under 10 CFR Parts 30 and 70.

### Benefits and Costs

The benefits of the proposed action come from the value added, costs saved, and energy saved by recycling contaminated metal scrap into salable smelted alloys.

If the total net benefits are expressed in dollars for building a smelter at Oak Ridge, TN, they would be (for enrichment plant scrap) \$34.2 million from 8,400 metric tons of nickel, \$2.3 million from 1,600 metric tons of copper, and \$5.1 million from 31,800 metric tons of steel. Other alternatives (commercial smelter, Fernald, OH, smelter) yield similar total net dollar benefits.

The costs of the proposed action are primarily the radiological impacts from the smelting of scrap and the subsequent possession, use, and disposal of smelted alloys by exempt persons. The nonradiological impacts are similar for both contaminated and noncontaminated metal scrap.

If the radiological impacts are expressed in individual doses, collective doses, and health effects, they would be (for enrichment plant scrap):

|                                                                                           |                  |
|-------------------------------------------------------------------------------------------|------------------|
| Maximum Individual Total-Body Dose Rate (working 1000 hr/yr inside "vault")               | 0.01 rem/yr.     |
| Maximum Individual Total-Body Dose Commitment (daily ingestion of iron tonic over 1 year) | 0.002 rem.       |
| Maximum Individual Local Skin Dose (dose to wrist from bracelet worn 50 years)            | 15 rems.         |
| Maximum Individual Contact Bone Dose (dose from pin implanted 50 years)                   | 20 rems.         |
| Occupational (total scrap smelting)                                                       | 0.01 person-rem. |
| General Population (total scrap)                                                          | 80 person-rem.   |
| Health Effects from Population Dose (incremental number of cancers in exposed population) | <1.              |

### Proposed Findings

The Commission is considering a finding that exemption from licensing requirements for the receipt, possession, use, or transfer of technetium-99 as residual contamination in any smelted alloy under the conditions set forth below will not constitute an unreasonable risk to the common defense and security and to the health and safety of the public.

The Commission is also considering a finding that exemption from licensing requirements for the receipt, possession, use, or transfer of low-enriched uranium as residual contamination in any smelted alloy under the conditions set forth below would not be inimical to the common defense and security and

would not constitute an unreasonable risk to the health and safety of the public.

The provisions of § 150.15(a)(6) of 10 CFR Part 150, "Exemptions and Continued Regulatory Authority in Agreement States Under Section 274," would be amended to cover any equipment, device, commodity, or other product containing special nuclear material. Accordingly, the transfer of possession or control by persons in Agreement States who produce smelted alloys for use by exempt persons would be subject to the Commission's licensing and regulatory requirements, even though the scrap is smelted under an Agreement State license. Such producers wishing to transfer possession or control of smelted alloys for use by exempt persons would be required to obtain a specific license issued by the Commission.

### Availability of Draft Environmental Statement

Pursuant to the National Environmental Policy Act of 1969, and the Commission's regulations in 10 CFR Part 51, "Licensing and Regulatory Policy and Procedures for Environmental Protection," the Commission's Office of Standards Development has prepared a draft environmental impact statement using the enrichment plant scrap as an example source for smelted alloys. (The decommissioning of uranium enrichment plants, nuclear power reactors, uranium hexafluoride plants, and fuel facilities would, under present regulations, all be major Federal actions requiring the preparation of environmental impact statements to evaluate, among other things, the environmental, economic, and radiological health impacts of smelting scrap and transferring smelted alloy.) The statement is available for inspection by the public in the Commission's Public Document Room at 1717 H Street NW., Washington, D.C. Single copies of the statement (NUREG-0518) may be obtained by request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Office of Standards Development.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of title 5 of the United States Code, notice is hereby given that adoption of the following amendments to 10 CFR Parts 30, 32, 70, and 150 is contemplated.

## PART 30—RULES OF GENERAL APPLICABILITY TO DOMESTIC LICENSING OF BYPRODUCT MATERIAL

1. In 10 CFR Part 30, a new § 30.21 is added to read as follows:

### § 30.21 Smelted alloys containing technetium-99 as residual contamination.

(a) Except as provided in paragraph (c) of this section, any person is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in Parts 30-35 of this chapter to the extent that such person receives, possesses, uses, or transfers technetium-99 as residual contamination (1) in any smelted alloy in which the technetium-99 is a minor constituent less than 5 parts per million of a representative sample of the smelted alloy, or (2) in any material into which such smelted alloy or its constituents may have been converted.

(b) The exemption in paragraph (a) of this section does not authorize the transfer of smelted alloy containing:

(1) Byproduct material other than technetium-99 as residual contamination except in accordance with the requirements of this part and Parts 31-35 of this chapter; or

(2) Source material or special nuclear material except in accordance with the requirements of Parts 40 and 70 of this chapter.

(c) Any person who desires to smelt scrap contaminated with technetium-99 or who desires to initially transfer for sale or distribution smelted alloys containing technetium-99 as residual contamination in the smelted alloy to persons exempt under paragraph (a) of this section or equivalent regulations of an Agreement State, should apply for a specific license issued pursuant to § 32.30 of this chapter, which license states that the technetium-99 as residual contamination in the smelted alloy may be transferred by the licensee to persons exempt under paragraph (a) of this section or equivalent regulations of an Agreement State.

## PART 32—SPECIFIC DOMESTIC LICENSES TO MANUFACTURE OR TRANSFER CERTAIN ITEMS CONTAINING BYPRODUCT MATERIAL

2. In 10 CFR Part 32, the authority statement immediately preceding § 32.1 is revised to read as follows:

Authority: Secs. 81, 161, 182, 183, 68 Stat. 935, 948, 953, 954, 42 U.S.C. 2111, 2201, 2232, 2233. For the purposes of sec. 223, 68 Stat. 958, as amended; 42 U.S.C. 2273, 32.12, 32.16, 32.20, 32.25(c), 32.29(c), 32.30(b), 32.52, 32.56, 32.60, 32.63 issued under sec. 161, 68 Stat. 950, as amended; 42 U.S.C. 2201(o), unless otherwise noted.

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3. In 10 CFR Part 32, a new § 32.30 is added to read as follows:

**§ 32.30 Smelted alloys containing technetium-99 as residual contamination: requirements for license to smelt scrap or to initially transfer.**

(a) An application for a specific license to smelt scrap contaminated with technetium-99 or to initially transfer for sale or distribution smelted alloys containing technetium-99 as residual contamination for use pursuant to § 30.21 of this chapter or equivalent regulations of an Agreement State, will be approved if:

(1) The applicant satisfies the general requirements of § 30.33 of this chapter: *Provided, however,* That the requirements of § 30.33(a)(2) and (3) of this chapter do not apply to an application for a license to transfer technetium-99 in any alloy smelted pursuant to a license issued by an Agreement State; and

(2) The applicant submits a description of:

(i) Procedures for prior decontamination of the scrap and smelting of the scrap sufficient to provide reasonable assurance that the technetium-99 will be residual contamination in the resulting billets, ingots, or other smelted alloy products in which the technetium-99 is a minor constituent less than 5 parts per million of representative samples of the billets, ingots, or other smelted alloy products;

(ii) Sampling procedures sufficient to demonstrate that the material taken for analysis is a representative sample of the billet, ingot, or other smelted alloy product being analyzed; and

(iii) Analytical procedures to estimate technetium-99 concentrations with sufficient precision and accuracy to provide reasonable assurance that the technetium-99 is less than 5 parts per million of representative samples of the billets, ingots, or other smelted alloy products being analyzed.

(b) Each person licensed under paragraph (a) of this section shall file an annual report with the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the appropriate NRC Regional Office listed in Appendix D of Part 20 of this chapter, which shall identify the type and quantity of smelted alloy produced during the reporting period and the concentrations of technetium-99 in the smelted alloy billets, ingots, or other products at the time of transfer of the technetium-99 by the licensee. If no transfers of technetium-99 have been made pursuant to paragraph (a) of this section during the reporting period, the

report shall so indicate. The report shall cover the year ending June 30, and shall be filed within 30 days thereafter.

### PART 70—DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

4. In 10 CFR Part 70, the authority statement immediately preceding the undesignated center heading GENERAL PROVISIONS is revised to read as follows:

**Authority:** Secs. 51, 53, 161, 182, 183, 68 Stat. 929, 930, as amended, 948, as amended, 953, as amended, 954 (42 U.S.C. 2071, 2073, 2201, 2232, 2233); secs. 202, 206, 88 Stat. 1244, 1246 (42 U.S.C. 5842, 5846) unless otherwise noted. For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273), 70.32(a)(6) and 70.41(a) issued under sec. 161b., 68 Stat. 948; 42 U.S.C. 2201(b) and 70.38(b) and 70.51 to 70.55 issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)), unless otherwise noted

5. In 10 CFR Part 70, new §§ 70.15 and 70.38 are added to read as follows:

#### **§ 70.15 Low-enriched uranium as residual contamination in smelted alloys.**

(a) Except as provided in paragraph (c) of this section, any person is exempt from the requirements for a license set forth in section 53 of the Act and from the regulations in this part to the extent that such person receives, possesses, uses, or transfers low-enriched uranium as residual contamination (1) in any smelted alloy in which the uranium element is a minor constituent less than 17.5 parts per million of a representative sample of the smelted alloy, or (2) in any material into which such smelted alloy or its constituents may have been converted.

(b) The exemption in paragraph (a) of this section does not authorize the transfer of smelted alloy containing:

(1) Byproduct material or source material except in accordance with the requirements of Parts 30 or 40 of this chapter; or

(2) Special nuclear material other than low-enriched uranium as residual contamination except in accordance with the requirements of this part.

(c) Any person who desires to smelt scrap contaminated with low-enriched uranium or who desires to initially transfer for sale or distribution smelted alloys containing low-enriched uranium as residual contamination in the smelted alloy to persons exempt under paragraph (a) of this section or equivalent regulations of an Agreement State, should apply for a specific license issued pursuant to § 70.38, which license states that the low-enriched uranium as residual contamination in the smelted alloy may be transferred by the licensee to persons exempt under paragraph (a)

of this section or equivalent regulations of an Agreement State.

#### **§ 70.38 Specific licenses to smelt scrap or to initially transfer smelted alloys containing low-enriched uranium as residual contamination.**

(a) An application for a specific license to smelt scrap contaminated with low-enriched uranium or to initially transfer for sale or distribution smelted alloys containing low-enriched uranium as residual contamination for use pursuant to § 70.15 or equivalent regulations of an Agreement State, will be approved if:

(1) The applicant satisfies the general requirements of § 70.23: *Provided, however,* That the requirements of § 70.23(a)(3) and (4) do not apply to an application for a license to transfer low-enriched uranium in any alloy smelted pursuant to a license issued by an Agreement State.

(2) The applicant submits a description of:

(i) The history of the scrap, or the isotopic analyses performed, sufficient to provide reasonable assurance that the uranium element in or on the scrap is low-enriched uranium;

(ii) Procedures for prior decontamination of the scrap and smelting of the scrap sufficient to provide reasonable assurance that the low-enriched uranium will be residual contamination in the resulting billets, ingots, or other smelted alloy products in which the low-enriched uranium is a minor constituent less than 17.5 parts per million of representative samples of the billets, ingots, or other smelted alloy products;

(iii) Sampling procedures sufficient to demonstrate that the material taken for analysis is a representative sample of the billet, ingot, or other smelted alloy product being analyzed; and

(iv) Analytical procedures to estimate uranium concentrations with sufficient precision and accuracy to provide reasonable assurance that the uranium element is less than 17.5 parts per million of representative samples of the billets, ingots, or other smelted alloy products being analyzed.

(b) Each person licensed under paragraph (a) of this section shall file an annual report with the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the appropriate NRC Regional Office listed in Appendix D of Part 20 of this chapter, which shall identify the type and quantity of smelted alloy produced during the reporting period and the concentrations of low-enriched uranium in the smelted alloy billets, ingots, or

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other products at the time of transfer of the low-enriched uranium by the licensee. If no transfers of low-enriched uranium have been made pursuant to paragraph (a) of this section during the reporting period, the report shall so indicate. The report shall cover the year ending June 30, and shall be filed within 30 days thereafter.

### **PART 150—EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY IN AGREEMENT STATES UNDER SECTION 274**

6. In 10 CFR Part 150, § 150.15(a)(6) is revised to read as follows:

#### **§ 150.15 Persons not exempt.**

(a) Persons in Agreement States are not exempt from the Commission's licensing and regulatory requirements with respect to the following activities:

(6) The transfer of possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing special nuclear material, source material, or byproduct material whose subsequent possession, use, transfer, and disposal by all other persons are exempted from licensing and regulatory requirements of the Commission under Parts 30, 40, and 70 of this chapter.





**UNITED STATES NUCLEAR REGULATORY COMMISSION**  
**RULES and REGULATIONS**  
**TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY**

**PART**  
**31**

**GENERAL DOMESTIC LICENSES FOR BYPRODUCT MATERIAL**

**PROPOSED RULE MAKING**

36 FR 6015  
Published 4/1/71  
Comment Period expires 5/31/71

*Exemption of Certain Static Elimination  
Devices and Ion Generating Tubes Con-  
taining Tritium, Krypton-85, or Polonium-  
210*

See Part 30 Proposed Rule Making.

➤ 45 FR 71807

Published 10/30/80  
Comment period expires 12/29/80

**10 CFR Parts 31 and 150**

**NRC's Jurisdiction Over Persons Using  
Byproduct, Source and Special  
Nuclear Material in Offshore Waters  
Beyond Agreement States' Territorial  
Waters**

**AGENCY:** Nuclear Regulatory  
Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is considering amending its regulations (1) to clarify that it has jurisdiction vis-a-vis Agreement States over persons using byproduct, source, and special nuclear materials in offshore waters beyond Agreement States' territorial waters and within the area of the Outer Continental Shelf and (2) to recognize Agreement State specific licenses in an NRC general license covering activities in these waters.

**DATES:** Comment period expires December 29, 1980. Comments received after December 29, 1980 will be considered if it is practical to do so, but assurance of consideration cannot be given except as to comments filed on or before December 29, 1980.

**ADDRESSES:** Interested persons are invited to submit written comments and suggestions on the proposed amendments or the supporting value-

impact analysis, or both, to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Single copies of the value-impact analysis may be obtained on request from the Office of Executive Legal Director. Copies of the value-impact analysis and of the comments received by the Commission may be examined in the Commission's Public Document Room at 1717 H Street, N.W., Washington, D.C.

**FOR FURTHER INFORMATION CONTACT:** Thomas F. Dorian, Esq., Office of the Executive Legal Director, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Telephone: 301-492-8690).

**SUPPLEMENTARY INFORMATION:** Several recent incidents in the Gulf of Mexico involving actual or potential overexposures to radiographers disclose the need to clarify NRC's jurisdiction vis-a-vis that of coastal Agreement States' over offshore radiographic, well-logging, and other operations using byproduct, source, or special nuclear materials. The following discussion addresses the issue of jurisdiction including several concerns raised by Louisiana and Texas with respect to this issue.

Licensing, regulatory, and enforcement problems have arisen

<sup>1</sup> An Agreement State is a State with which NRC has an agreement under section 274 of the Atomic Energy Act. Section 274 of the Atomic Energy Act was enacted in 1956, to recognize the States' interest in atomic energy activities, to clarify the respective responsibilities of the States and the Commission under the Act, and to provide a statutory means by which the Commission can discontinue certain of its regulatory responsibilities with respect to byproduct, source, and special nuclear materials and by which the States can assume these responsibilities. An Agreement made pursuant to section 274b carries out the basic Congressional intent that either the State or the Commission—but not both—should regulate a given atomic energy activity from the point of view of radiation protection. One of the evils that Congress sought to avoid was "dual regulation." This means that insofar as regulation of these materials by the State and Commission is concerned, the activities discontinued under the agreement will be regulated only by the State, and that the activities reserved by the Commission will be regulated only by the Commission.

because it has been unclear whether a person with a specific license from an Agreement State or from NRC, operating in offshore waters beyond a coastal Agreement State's territorial waters (that is, outside State boundaries which normally extend three miles or three marine leagues from the coastline but within the area of the Outer Continental Shelf), should be licensed and regulated by the Agreement State or by the Commission.

After examining the issue of jurisdiction, the Commission has concluded that NRC retains jurisdiction vis-a-vis coastal Agreement States over persons using byproduct, source, and special nuclear materials when these materials are used in offshore waters beyond these States' territorial waters. NRC's jurisdiction over persons using these materials begins outside these States' territorial waters off the U.S. Outer Continental Shelf, continues past the Shelf onto the high seas, and, in most instances, stops at waters under another country's jurisdiction. This conclusion is based on several considerations.

The Commission's jurisdiction over persons using byproduct, source, or special nuclear materials is found in sections 81 and 82 (byproduct material), 62, 63, and 64 (source material), and 53, 54, and 57 (special nuclear material) of the Atomic Energy Act, as amended. These sections grant NRC *in personam* jurisdiction, that is, jurisdiction over a person (when stating, "No person may . . .").

Until the tidelands and submerged lands dispute about the Outer Continental Shelf arose between the Federal Government and certain States, the Atomic Energy Commission (AEC) followed a personal, as opposed to a territorial, approach to offshore jurisdiction. This allowed Agreement States, with AEC's acquiescence, to regulate their own citizens' offshore uses of materials within the purview of an agreement under section 274b of the Atomic Energy Act (discussed in the

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footnote); in 1967, in light of the submerged lands controversy, this practice was changed in part because the Federal Government argued that things, such as oil drilling rigs, attached to the Outer Continental Shelf were subject to its exclusive jurisdiction; for the AEC, this meant that an Agreement State did not have jurisdiction to regulate possession and use of byproduct, source or special nuclear materials on such things as oil rigs outside an Agreement State's territorial waters.

At the time of the submerged lands controversy, the AEC was negotiating a standard agreement with Louisiana pursuant to section 274b. of the Atomic Energy Act. So as not to compromise the pending litigation between the Federal Government and Louisiana, the AEC and Louisiana also entered into a Memorandum of Understanding and an agreement under section 274i. of the Atomic Energy Act. The Memorandum of Understanding, which is still in effect between NRC and Louisiana, states, in essence, that AEC (now NRC) retains regulatory authority over the disputed area in the Gulf of Mexico and that the agreement made pursuant to section 247b. of the Atomic Energy Act shall not prejudice the position of either the United States or Louisiana in the pending litigation. The agreement under section 274i. of the Act, which is also still in effect, invokes the authority granted to the Commission under section 274i. of the Act to enter into agreements with States "to perform inspections or other functions on a cooperative basis as the Commission deems appropriate." The agreement authorizes Louisiana to perform certain inspections and other functions for and on behalf of the Commission. The proposed rule is not intended to affect either the Memorandum of Understanding or the agreement made under section 274i. of the Act.

The Supreme Court in a series of cases has settled in the Federal Government's favor the Federal-State dispute over the Outer Continental Shelf in the Gulf of Mexico. *United States v. Louisiana*, 389 U.S. 155 (1967), 394 U.S. 1 (1969) (cited as the Texas Boundary Case), 394 U.S. 11 (1969) (cited as the Louisiana Boundary Case), and 404 U.S. 388 (1971) (also cited as the Louisiana Boundary Case).

It is now clear that the Outer Continental Shelf Lands Act has made the Outer Continental Shelf part of the United States (43 U.S.C. 1332(a)) under exclusive Federal jurisdiction (43 U.S.C. 1333(a)(1)), extending the laws of the United States to the subsoil and seabed of the Shelf and to all artificial islands and fixed structures erected thereon (43

U.S.C. 1333(a)(1)). It should be noted, however, that for some purposes State law is adopted as a surrogate for Federal law under the Act to the extent that such State law is "applicable and not inconsistent with . . . other Federal laws." 43 U.S.C. 1333(a)(2); *Rodriguez v. Aetna Casualty Co.*, 395 U.S. 352, 365 (1969); *Union Oil Company v. Oppen*, 501 F.2d 558, 561 (1974); *Oppe v. Aetna Insurance Co.*, 485 F.2d 252, 255 (1973). It should also be noted that the Act does not apply to the sea above the subsoil and seabed. 43 U.S.C. 1332(b).

It is clear as regards oil drilling rigs, for example, that NRC has jurisdiction over persons in offshore waters beyond an Agreement State's territorial waters using byproduct, source, or special nuclear materials on these rigs, for these rigs are attached to the Outer Continental Shelf.

It is also clear that NRC has jurisdiction over persons in offshore waters beyond an Agreement State's territorial waters and within the area of the Outer Continental Shelf using byproduct, source, or special nuclear materials on free-floating objects, such as lay barges or other vessels, or in offshore diving activities. This view is based on the *in personam* jurisdiction argument described before and supported by another argument.

Sections 274b. and 274d. of the Atomic Energy Act, under which NRC may either retain or discontinue certain part of its regulatory authority, do not provide for discontinuance of the Commission's regulatory authority over byproduct, source, or special nuclear materials not "within a State". Thus, the Commission retains jurisdiction over persons specifically licensed by the Commission or Agreement States using these materials when these persons are not within an Agreement State. This jurisdiction extends to the high seas but normally stops when it would conflict with another country's jurisdiction in its own waters.

Since the present problem is limited to incidents in offshore waters, and because the Commission has jurisdiction in these waters, it proposes to extend its general licensing scheme to activities of specific licensees of Agreement States in these waters. It would do so by (1) recognizing Agreement State specific licenses in an NRC general license covering activities in these waters, and (2) extending a reporting requirement to these licensees already used by NRC to monitor their activities. NRC specific licensees currently authorized to operate in these offshore waters, of course, would not need to request a license amendment in order to continue to do so.

The Commission believes that the proposed regulation change would

remove present ambiguities and provide uniform regulation. It therefore proposes to broaden the scope of Parts 31 and 151 to provide for Commission regulatory authority in the form of general licensing over persons in offshore waters beyond Agreement States' territorial waters and within the area of the Outer Continental Shelf. As presently drafted, §§ 31.6 and 150.20 grant a general license to a person with a specific license from an Agreement State to conduct the licensed activity within non-Agreement States. In addition, § 150.20 authorizes a person to engage in activities in non-Agreement States under NRC's general license for no more than 180 days in any calendar year. At the end of this period, the general license expires and the person would need a specific license from the Commission to continue to engage in these activities in non-Agreement States. The reason for obtaining such a license is the same as that described in *The Matter of Chem-Nuclear Systems, Inc.*, 10 NRC 865 (1979), namely, that long-term field operations should be controlled through specific licensing.

It should be noted that the proposed rule defines "offshore waters" as "those waters beyond Agreement States' territorial waters and within the area of the U.S. Outer Continental Shelf" without specifying for each Agreement State the exact boundaries of these waters and the land area of the Shelf. The definition of offshore waters is designed to keep the proposed rule simple. Aside from the fact that it is not feasible to draw cartographic lines in any regulation, it is unnecessary to do so. The Supreme Court has decided in the Federal Government's favor the Federal-State dispute over the land areas of the Outer Continental Shelf and, as a matter of law, defined the necessary boundary lines. In addition, in the cases of Texas and Louisiana cited before, the Supreme Court defined the necessary boundary lines as a matter of fact. Thus, in the case of Louisiana, for example, its jurisdiction over the seabed of the Shelf extends about three miles from its coast, and, in the case of Texas, for example, as a technical legal matter having to do with its admission as a State of the Union, its jurisdiction over the seabed of the Shelf extends about ten miles from its coast. The definition of territorial waters above the seabed of the Shelf is also clear, coinciding with the U.S. three-mile territorial limit extending from the U.S. coastline. In sum, the definition in the proposed rule is intended to cover, in an understandable and simple fashion, the Commission's jurisdiction over persons using byproduct, source, or special nuclear materials on things, such as oil rigs, attached to the seabed of the Outer

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Continental Shelf as well as the Commission's jurisdiction over persons using these materials in diving activities or on free-floating objects, such as lay barges and other vessels, in the waters above the seabed.

Finally, it should be noted that the proposed rule is focused on the Outer Continental Shelf area and not on the high seas. Thus, with respect to the high seas, NRC would continue, as has been the case historically, its licensing authority over certain kinds of persons, such as the Navy using nuclear material on naval vessels, while Agreement States would retain their authority over other kinds of persons, such as, for example, those using nuclear materials on State-chartered research vessels. In other words, the Commission acknowledges its present practice of regarding possession and use of agreement materials on the high seas by the citizens of littoral States, which have entered into agreements with the Commission pursuant to section 274b. of the Atomic Energy Act, as subject to the regulatory authority assumed by such States pursuant to such agreements. However, the Commission reserves the right to alter or amend such practice at any time.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Section 553 of Title 5 of the United States Code, notice is given hereby that the adoption of the following amendments to 10 CFR Parts 31 and 150 is contemplated.

### PART 31—GENERAL DOMESTIC LICENSES FOR BY PRODUCT MATERIAL

1. Section 31.6 is amended to read:

**§ 31.6 General license to install devices generally licensed in § 31.5.**

Any person who holds a general license issued by an Agreement State authorizing the holder to manufacture, install, or service a device described in § 31.5 within such Agreement State is hereby granted a general license to install and service such device in any non-Agreement State or in offshore waters beyond Agreement States' territorial waters and within the area of the U.S. Outer Continental Shelf. Provided, That:

### PART 150—EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY IN AGREEMENT STATES AND IN OFFSHORE WATERS UNDER SECTION 274

2. The title of 10 CFR Part 150 is changed to read, "Exemptions and Continued Regulatory Authority in Agreement States and in Offshore Waters Under Section 274"

3. Section 150.1 is amended to read:

#### § 150.1 Purpose.

The regulations in this part provide certain exemptions to persons in Agreement States from the licensing requirements contained in Chapters 6, 7, and 8 of the Act and from the regulations of the Commission imposing requirements upon persons who receive, possess, use or transfer byproduct material, source or special nuclear material in quantities not sufficient to form a critical mass; and to define activities in Agreement States and in offshore waters over which the regulatory authority of the Commission continues. The provisions of the Act, and regulations of the Commission apply to all persons in Agreement States and in offshore waters engaging in activities over which the regulatory authority of the Commission continues.

4. In § 150.3, a new paragraph (f) is added as follows and former paragraph (f) and subsequent paragraphs are relettered:

#### § 150.3 Definitions.

As used in this part: \* \* \*

(f) "Offshore waters" means those waters beyond Agreement States' territorial waters and within the area of the U.S. Outer Continental Shelf.

#### § 150.5 [Amended]

5. A new heading is added after § 150.5, to read as follows:

#### Continued Commission Regulatory Authority in Offshore Waters

6. A new § 150.7 is added before the heading "EXEMPTIONS IN AGREEMENT STATES," to read as follows:

#### § 150.7 Persons in offshore waters not exempt.

Persons in offshore waters are not exempt from the Commission's licensing and regulatory requirements with respect to byproduct, source, and special nuclear materials.

7. Section 150.2(a) is amended to read:

#### § 150.20 Recognition of Agreement State licenses.

(a) Subject to the provisions of paragraph (b) of this section, any person who holds a specific license from an Agreement State where the licensee maintains an office for directing the

licensed activity, and at which radiation safety records are normally maintained, is hereby granted a general license to conduct the same activity in non-Agreement States or in offshore waters: Provided, That the specific license does not limit the activity authorized by the license to specified installations or locations.

#### § 150.20 [Amended]

8. The first paragraph of § 150.20(b) is amended to read:

(b) Notwithstanding any provision to the contrary in any specific license issued by an Agreement State to a person who engages in activities in a non-Agreement State or in offshore waters under a general license provided in this section, the general license provided in this section is subject to the provisions of §§ 30.14(d), 30.34, 30.41, and 30.51 to 30.63, inclusive, of Part 30 of this chapter; §§ 40.41, 40.51, 40.61 to 40.63 inclusive, 40.71, and 40.81 of Part 40 of this chapter; and §§ 70.32, 70.42, 70.51 to 70.56 inclusive, 70.61, 70.62, and 70.71 of Part 70 of this chapter; and to the provisions of Parts 19, 20, and 71 and Subpart B of Part 34 of this chapter. In addition any person who engages in activities in non-Agreement States or in offshore waters under a general license provided in this section:

#### § 150.20 [Amended]

9. In § 150.20(b)(1), the title of Form NRC-241 (revised) is changed to read, "Report of Proposed Activities in Non-Agreement States or in Offshore Waters".

#### § 150.20 [Amended]

10. Section 150.20(b)(2) is amended to read:

(b) \* \* \*

(2) Shall not, in any non-Agreement State or in offshore waters, transfer or dispose of radioactive material possessed or used under the general license provided in this section except by transfer to a person (i) specifically licensed by the Commission to receive such material, or (ii) exempt from the requirements for a license for such material under § 30.14 of this chapter.





UNITED STATES NUCLEAR REGULATORY COMMISSION

RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

**PART  
32**

**SPECIFIC DOMESTIC LICENSES TO MANUFACTURE OR  
TRANSFER CERTAIN ITEMS CONTAINING  
BYPRODUCT MATERIAL**

**PROPOSED RULE MAKING**

36 FR 6015  
Published 4/1/71  
Comment Period expires 5/31/71

*Exemption of Certain Static Elimination De-  
vices and Ion Generating Tubes Containing  
Tritium, Krypton-85, or Polonium-210*

See Part 30 Proposed Rule Making.

➤ 45 FR 70874

Published 10/27/80

Comment period expires 12/11/80

*Exemption of Technetium-99 and  
Low-Enriched Uranium as Residual  
Contamination in Smelted Alloys*

See Part 30 Statements of Consideration



## PART 50 • DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gas-cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway shall focus on such actions as are appropriate to protect the food ingestion pathway.

### § 50.48 Fire protection schedules.

To the extent that any facility's license conditions or technical specifications incorporate compliance dates for modifications necessary to provide fire protection features proposed by a licensee and accepted by the NRC staff as satisfying the provisions of Appendix A to Branch Technical Position BTP/APCSB 9.5-1 and reflected in NRC staff Fire Protection Safety Evaluation Reports issued prior to the effective date of this rule, those dates are hereby suspended pending further action by the Commission.

### ISSUANCE, LIMITATIONS, AND CONDITIONS OF LICENSES AND CONSTRUCTION PERMITS

#### § 50.50 Issuance of licenses and construction permits.

Upon determination that an application for a license meets the standards and requirements of the act and regulations, and that notifications, if any, to other agencies or bodies have been duly made, the Commission will issue a license, or if appropriate a construction permit, in such form and containing such conditions and limitations including technical specifications, as it deems appropriate and necessary.

#### § 50.51 Duration of license, renewal.

Each license will be issued for a fixed period of time to be specified in the license but in no case to exceed 40 years from the date of issuance. Where the operation of a facility is involved the Commission will issue the license for the term requested by the applicant or for the estimated useful life of the facility if the Commission determines that the estimated useful life is less than the term requested. Where construction of a facility is involved, the Commission may specify in the construction permit the period for which the license will be issued if approved pursuant to § 50.56. Licenses may be renewed by the Commission upon the expiration of the period.

#### § 50.52 Combining licenses.

The Commission may combine in a single license the activities of an applicant which would otherwise be licensed severally.

#### § 50.53 Jurisdictional limitations.

No license under this part shall be deemed to have been issued for activities which are not under or within the jurisdiction of the United States.†

#### § 50.54 Conditions of licenses.

Whether stated therein or not, the following shall be deemed conditions in every license issued:

(a) [Deleted 32 FR 2562.]

(b) No right to the special nuclear material shall be conferred by the license except as may be defined by the license.

(c) Neither the license, nor any right thereunder, nor any right to utilize or produce special nuclear material shall be transferred, assigned, or disposed of in any manner, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission shall, after securing full information, find that the transfer is in accordance with the provisions of the act and give its consent in writing.

(d) The license shall be subject to suspension and to the rights of recapture of the material or control of the facility reserved to the Commission under section 108 of the act in a state of war or national emergency declared by Congress.

(e) The license shall be subject to revocation, suspension, modification, or amendment for cause as provided in the act and regulations, in accordance with the procedures provided by the act and regulations.

(f) The licensee will at any time before expiration of the license, upon request of the Commission submit written statements, signed under oath or affirmation, to enable the Commission to determine whether or not the license should be modified, suspended or revoked.

(g) The issuance or existence of the license shall not be deemed to waive, or relieve the licensee from compliance with, the antitrust laws, as specified in subsection 105a of the act. In the event that the licensee should be found by a court of competent jurisdiction to have violated any provision of such antitrust laws in the conduct of the licensed activity, the Commission may suspend or revoke the license or take such other action with respect to it as shall be deemed necessary.

(h) The license shall be subject to the provisions of the act now or hereafter in effect and to all rules, regulations, and orders of the Commission. The terms and conditions of the license shall be subject to amendment, revision, or modification, by reason of amendments of the act or by reason of rules, regulations,

and orders issued in accordance with the terms of the act.

(i) Except as provided in § 55.9 of this chapter, the licensee shall not permit the manipulation of the controls of any facility by anyone who is not a licensed operator or senior operator as provided in Part 55 of this chapter.

(1-1) Within three (3) months after issuance of an operating license, the licensee shall have in effect an operator requalification program which shall, as a minimum, meet the requirements of Appendix A of Part 55 of this Chapter. Notwithstanding the provisions of § 50.59 the licensee shall not, except as specifically authorized by the Commission, make a change in an approved operator requalification program by which the scope, time allotted for the program or frequency in conducting different parts of the program is decreased.

Holders of operating licenses in effect on September 17, 1973 shall implement an operator requalification program which, as a minimum, meets the requirements of Appendix A of Part 55 of this chapter which was submitted for approval by the Atomic Energy Commission.

(j) Apparatus and mechanisms other than controls, the operation of which may affect the reactivity or power level of a reactor shall be manipulated only with the knowledge and consent of an operator or senior operator licensed pursuant to Part 55 of this chapter present at the controls.

(k) An operator or senior operator licensed pursuant to Part 55 of this chapter shall be present at the controls at all times during the operation of the facility.

(l) The licensee shall designate individuals to be responsible for directing the licensed activities of licensed operators. These individuals shall be licensed as senior operators pursuant to Part 55 of this chapter.

(m) A senior operator licensed pursuant to Part 55 of this chapter shall be present at the facility or readily available on call at all times during its operation, and shall be present at the facility during initial start-up and approach to power, recovery from an unplanned or unscheduled shut-down or significant reduction in power, and refueling, or as otherwise prescribed in the facility license.

\*\*\* (n) The licensee shall not, except as authorized pursuant to a construction permit, make any alteration in the facility constituting a change from the technical specifications previously incorporated in a license or construction permit pursuant to § 50.36.

(o) Primary reactor containments for water cooled power reactors shall be subject to the requirements set forth in Appendix J.

† Amended 43 FR 6915.

\*\* Amended 38 FR 26354.

\*\*\* Revised 31 FR 3668.

## PART 50 • DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

(p) The licensee shall prepare and maintain safeguards contingency plan Procedures in accordance with Appendix C of 10 CFR Part 73 for effecting the actions and decisions contained in the Responsibility Matrix of the safeguards contingency plan. The licensee may make no change which would decrease the effectiveness of a security plan prepared pursuant to § 50.34(c) or Part 73 of this chapter, or of the first four categories of information (Background, Generic Planning Base, Licensee Planning Base, Responsibility Matrix) contained in a licensee safeguards contingency plan prepared pursuant to § 50.34(d) or Part 73, as applicable, without prior approval of the Commission. A licensee desiring to make such a change shall submit an application for an amendment to his license pursuant to § 50.90. The licensee may make changes to the security plan or to the safeguards contingency plan without prior Commission approval if the changes do not decrease the safeguards effectiveness of the plan. The licensee shall maintain records of changes to the plans made without prior Commission approval for a period of two years from the date of the change, and shall furnish to the Director of Nuclear Material Safety and Safeguards (for enrichment and reprocessing facilities) or to the Director of Nuclear Reactor Regulation (for nuclear reactors), U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the appropriate NRC Regional Office specified in Appendix A of Part 73 of this chapter, a report containing a description of each change within two months after the change is made. Prior to the safeguards contingency plan being put into effect, the licensee shall have:

- (1) All safeguards capabilities specified in the safeguards contingency plan available and functional,
- (2) Detailed Procedures developed according to Appendix C to Part 73 available at the licensee's site, and
- (3) All appropriate personnel trained to respond to safeguards incidents as outlined in the plan and specified in the detailed Procedures.

The licensee shall provide for the development, revision, implementation, and maintenance of his safeguards contingency plan. To this end, the licensee shall provide for a review at least every 12 months of the safeguards contingency plan by individuals independent of both security program management and personnel who have direct responsibility for implementation of the security program. The review shall include a review and audit of safeguards contingency procedures and practices, an audit of the security system testing and maintenance program, and a test of the safeguards system along with commitments establish for response by local law enforcement authorities. The results of the review and audit, along with recommendations for improvements, shall be documented, reported to the licensee's

corporate and plant management, and kept available at the plant for inspection for a period of two years.

➤ (q) A licensee authorized to possess and/or operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in § 50.47(b) and the requirements in Appendix E of this Part. A licensee authorized to possess and/or operate a research reactor or a fuel facility shall follow and maintain in effect emergency plans which meet the requirements in Appendix E of this Part. The nuclear power reactor licensee may make changes to these plans without Commission approval only if such changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of § 50.47(b) and the requirements of Appendix E of this Part. The research reactor licensee and/or the fuel facility licensee may make changes to these plans without Commission approval only if such changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the requirements of Appendix E of this Part. Proposed changes that decrease the effectiveness of the approved emergency plans shall not be implemented without application to and approval by the Commission. The licensee shall furnish 3 copies of each proposed change for approval; and/or if a change is made without prior approval, 3 copies shall be submitted within 30 days after the change is made or proposed to the Director of the appropriate NRC regional office specified in Appendix D, 10 CFR Part 20, with 10 copies to the Director of Nuclear Reactor Regulation, or, if appropriate, the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

(r) Each licensee who is authorized to possess and/or operate a research or test reactor facility with an authorized power level greater than or equal to 500 kW thermal, under a license of the type specified in § 50.21(c), shall submit emergency plans complying with 10 CFR Part 50, Appendix E, to the Director of Nuclear Reactor Regulation for approval within one year from the effective date of this rule. Each licensee who is authorized to possess and/or operate a research reactor facility with an authorized power level less than 500 kW thermal, under a license of the type specified in § 50.21(c), shall submit emergency plans complying with 10 CFR Part 50, Appendix E, to the Director of Nuclear Reactor Regulation for approval within two years from the effective date of this amendment.

(s)(1) Each licensee who is authorized to possess and/or operate a nuclear power reactor shall submit to NRC within 60 days of the effective date of this amendment the radiological emergency response plans of State and local governmental entities in the United States that are wholly or partially within a plume exposure pathway EPZ, as well as the plans of State governments wholly or partially within an ingestion pathway EPZ.<sup>1, 2</sup> Ten (10) copies of the above plans shall be forwarded to the Director of Nuclear Reactor Regulation with 3 copies to the Director of the appropriate NRC regional office. Generally, the plume exposure pathway EPZ for nuclear power reactors shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 km) in radius. The exact size and configuration of the EPZs for a particular nuclear power reactor shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gas-cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway EPZ shall focus on such actions as are appropriate to protect the food ingestion pathway.

(2) For operating power reactors, the licensee, State, and local emergency response plans shall be implemented by April 1, 1981, except as provided in Section IV.D.3 of Appendix E of this Part. If after April 1, 1981, the NRC finds that the state of emergency preparedness does not provide reasonable assurance that appropriate protective measures can and will be taken in the event of a radiological emergency and if the deficiencies are not corrected within four months of that finding, the Commission will determine whether the reactor shall be shut down until such deficiencies are remedied or whether other enforcement action is appropriate. In determining whether a shutdown or other enforcement action is appropriate, the Commission shall take into account, among other factors, whether the licensee can demonstrate to the Commission's satisfaction that the deficiencies in the plan are not

<sup>1</sup> Emergency Planning Zones (EPZs) are discussed in NUREG-0396; EPA 520/1-78-016, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants," December 1978.

<sup>2</sup> If the State and local emergency response plans have been previously provided to the NRC for inclusion in the facility docket, the applicant need only provide the appropriate reference to meet this requirement.

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and for public evacuation or other protective measures, should they become necessary, shall be described. This description shall include identification of the principal officials, by title and agencies, for the Emergency Planning Zones<sup>2</sup> (EPZs).

2. Provisions shall be described for the yearly dissemination to the public within the plume exposure pathway EPZ of basic emergency planning information such as the possibility of nuclear accidents, the potential human health effects of such accidents and their causes, methods of notification, and the protective actions planned if an accident occurs, as well as a listing of local broadcast network that will be used for dissemination of information during an emergency.

3. Administrative and physical means, and the time required, shall be described for alerting and providing prompt instructions<sup>3</sup> to the public within the plume exposure pathway Emergency Planning Zone. It is the applicant's responsibility to ensure that such means exist, regardless of who implements this requirement.

### E. Emergency Facilities and Equipment

Provisions shall be made and described for emergency facilities and equipment, including:

1. Equipment at the site for personnel monitoring;
2. Equipment for determining the magnitude of and for continuously assessing the release of radioactive materials to the environment;
3. Facilities and supplies at the site for decontamination of onsite individuals;
4. Facilities and medical supplies at the site for appropriate emergency first aid treatment;
5. Arrangements for the services of a physician and other medical personnel qualified to handle radiation emergencies;
6. Arrangements for transportation of injured or contaminated individuals from the site to treatment facilities outside the site boundary;
7. Arrangements for treatment of individuals injured in support of licensed activities on the site at treatment facilities outside the site boundary;
8. One onsite technical support center and one near-site emergency operation center from which effective direction can be given and effective control can be exercised during an emergency;
9. At least one onsite and one offsite communications system, including redundant power sources. This will include the communication arrangements for emergencies, including titles and alternates for those in charge at both ends of the communication links and the primary and backup means of communication. Where consistent with function of the governmental agency, these arrangements will include:
  - a. Provision for communications with contiguous State/local governments within the plume exposure pathway Emergency Planning Zone. Such communications shall be tested monthly.

b. Provision for communications with Federal emergency response organizations. Such communications systems shall be tested annually.

c. Provision for communications between the nuclear facility, State and/or local emergency operations centers, and field assessment teams. Such communications systems shall be tested annually.

### F. Training

The program to provide for (1) the training of employees and exercising, by periodic drills, of radiation emergency plans to ensure that employees of the licensee are familiar with their specific emergency response duties, and (2) the participation in the training and drills by other persons whose assistance may be needed in the event of a radiation emergency shall be described. This shall include a description of specialized initial training and periodic retraining programs to be provided to each of the following categories of emergency personnel:

- a. Directors or coordinators of the plant emergency organization.
- b. Personnel responsible for accident assessment, including control room shift personnel.
- c. Radiological monitoring teams.
- d. Fire control teams (fire brigades).
- e. Repair and damage control teams.
- f. First aid and rescue teams.
- g. Local services personnel, e.g., local Civil Defense, local law enforcement personnel, and local news media persons.
- h. Medical support personnel.
- i. Licensee's headquarters support personnel.
- j. Security personnel.

The plan shall describe provisions for the conduct of yearly drills and exercises to test the adequacy of timing and content of implementing procedures and methods, to test emergency equipment and communication networks, and to ensure that emergency organization personnel are familiar with their duties. Such provisions shall specifically include participation by offsite personnel as described above as well as other State and local governmental agencies. The plan shall also describe provisions for a joint exercise involving the Federal, State, and local response organizations. The scope of such an exercise should test as much of the emergency plans as is reasonably achievable without involving full public participation. Definitive performance criteria shall be established for all levels of participation to ensure an objective evaluation. This joint Federal, State, and local exercise shall be:

1. For presently operating plants, initially within one year of the effective date of this amendment and once every [Alternative A: three years] or [Alternative B: five years] thereafter.

3. For a plant for which an operating license is issued after the effective date of this amendment, initially within one year of the issuance of the operating license and once every [Alternative A: three years] or [Alternative B: five years] thereafter.

All training provisions shall provide for formal critiques in order to evaluate the emergency plan's effectiveness and to correct weak areas through feedback with emphasis on schedules, lesson plans, practical training, and periodic examinations.

### G. Maintaining Emergency Preparedness

Provisions to be employed to ensure that the emergency plan, its implementing procedures and emergency equipment and supplies are maintained up to date shall be described.

### H. Recovery

Criteria to be used to determine when to the extent possible, following an accident, reentry of the facility is appropriate or when operation should be continued.

### V. Implementing Procedures

No less than 180 days prior to scheduled issuance of an operating license, 10 copies each of the applicant's detailed implementing procedures for its emergency plan shall be submitted to NRC Headquarters and to the appropriate NRC Regional Office: Provided that, in cases where the operating license is scheduled to be issued less than 180 days after the effective date of this rule, such implementing procedures shall be submitted as soon as practicable. Within 60 days after the effective date for compliance under § 50.54(v) with the revised Appendix E, licensees who are authorized to operate a nuclear power facility shall submit 10 copies each of the licensee's emergency plan implementing procedures to NRC Headquarters and to the appropriate NRC Regional Office. As necessary to maintain them up to date thereafter, 10 copies each of any changes to these implementing procedures shall be submitted to NRC Headquarters and to the same NRC Regional Office within 30 days of such changes.

<sup>2</sup> It is expected that the capability will be provided to essentially complete alerting of the public within the plume exposure pathway EPZ within 15 minutes of the notification by the licensee of local and State officials.



## PART 50 • PROPOSED RULE MAKING

N524-1976 (N18-20), "Nuclear Plant Reliability Data Collection and Reporting System,"<sup>1</sup> and was developed under the aegis of the American National Standards Institute with the participation of industry, the Government and the public.

This advance notice of proposed rulemaking is being issued to invite advice and recommendations on several questions to help the NRC decide whether or not participation in NPRDS should be made mandatory. The accident at Three Mile Island and reports on the accident have pointed to the need for additional data for operational safety reasons. Therefore, it is the Commission's intent to make participation in the NPRDS mandatory unless comments received provide sufficient reasons to the contrary. However, the proposal contained in this notice may change in light of comments received.

**DATES:** The comment period expires March 31, 1980.

**ADDRESSES:** Interested persons are invited to submit written comments and suggestions to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments received by the Commission may be examined in the Commission's Public Document Room at 1717 H Street, N.W., Washington, D.C. Comments may also be delivered to Room 1121, between 8:15 a.m. and 5:00 p.m.

**FOR FURTHER INFORMATION CONTACT:** M. S. Medeiros, Jr., Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 or telephone (301) 443-5913.

### **SUPPLEMENTARY INFORMATION:**

#### **Historical Background**

The Nuclear Plant Reliability Data System (NPRDS) is an industry effort under the overall guidance of the American National Standards Institute (ANSI) and its N18-20 Subcommittee. The NPRDS started to accept data in July 1974 after completing a pilot program involving six plants. The NPRDS contains both an engineering data base and a failure-reporting data bank, for most commercial nuclear power plants, covering systems and components designated Safety Class 1 and Safety Class 2 by ANSI standards ANS 52.1/N212 (Boiling Water Reactor

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Comment period expires 3/31/80

### **10 CFR Part 50**

#### **Domestic Licensing of Production and Utilization Facilities; Operational Data Gathering**

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Advance notice of proposed rulemaking.

**SUMMARY:** The U.S. Nuclear Regulatory Commission is considering amending its regulations to require that participation in the Nuclear Plant Reliability Data System (NPRDS) be made mandatory for power reactor licensees. The NPRDS, currently a voluntary reporting system, is described in American National Standards Institute (ANSI) Standard

<sup>1</sup> Copies may be obtained from the American Nuclear Society, 555 North Kensington Avenue, LaGrange Park, Illinois 60525.

## PART 50 - PROPOSED RULE MAKING

believes that the costs of such delays are not justified provided that design flexibility can be demonstrated.

The Commission believes that Option 3 is a suitable compromise between the extremes of Options 1 and 2. This option will ensure that approved action items in the Action Plan are applied to the new CPs and will provide for early consideration of added safety measures that can be incorporated into the design without the need for inordinately costly backfit. By establishing a clear statement of requirements with respect to the issues to be determined by rulemaking, a degree of stability is introduced into the CP review process thereby allowing prospective applicants to make better-informed decisions.

In its review of the Action Plan the Commission has identified four areas that it believes merit special attention. The following identifies these areas and describes the Commission's present position with respect to the requirements that should be met by CP and ML applicants.

1. *Siting*—The Commission has already established a transition policy for CP applicants. CP applicants would be asked to compare their sites with the recommendations of NUREG-0625, as modified by the NRC's Office of Policy Evaluation and Advisory Committee on Reactor Safeguards. At such time as the proposed rule on siting is issued for comment (schedule for October 1980), CP applications would be assessed against the criteria contained in the proposed rule and any needed additional requirements will be proposed by the staff.

2. *Degraded Core Rulemaking*—CP and ML applicants would describe the degree to which their designs conform to the proposed interim rule. Applicants would also provide reasonable assurance, to the extent practicable and taking into account the present state-of-the-art in the technology, that issuance of CPs and MLs will not foreclose or preclude modification of the facilities to accommodate potential requirements that may result from the rulemaking proceedings. These potential requirements include such features as filtered vented containment, molten core retention, and hydrogen control systems. Special attention would be given to those facility designs with small containment volumes, i.e., ice condenser and Mark III containment design. Prior to issuance of the CP or ML, applicants would be required to submit their evaluation of the additional features, both preventive and mitigative, they propose to include at their facilities that have the potential for significant risk reduction.

3. *Reliability Engineering*—CP and ML applicants would perform simplified system reliability analyses for the

following systems: subcriticality systems, emergency feedwater systems (PWRs), reactor core isolation cooling (BWRs), ECCS injection and recirculation systems, shutdown cooling systems, containment cooling and spray systems, safety features actuating systems, and auxiliary systems upon which these depend (alternating and direct current, compressed air, essential service or cooling systems, and heating, ventilating and air conditioning systems). These analyses would use event-tree and fault-tree logic techniques to identify design weaknesses and possible system modifications that would be made to improve the capability and reliability of the above systems under various transient and loss-of-coolant accident events. Particular emphasis would be given to determining potential failures that could result from human errors, common causes, single point vulnerabilities, and test and maintenance outages.

CP and ML applicants should provide sufficient information to describe the nature of the studies, how they are to be conducted, the completion dates, and the program to assure that the results of such studies are factored into the final designs.

4. *Emergency Preparedness*—CP applicants would submit, prior to the issuance of construction permits, a discussion of their preliminary plan for coping with emergencies addressing the amended rule (Appendix E to 10 CFR Part 50) as it applies to construction permit applications. Sufficient detail would be presented to provide reasonable assurance that the requirements will be implemented properly.

The remaining Action Plan items that the Commission has determined to be applicable to the pending CP and ML application are set forth in NUREG-0718 which also sets forth the required commitments or design information necessary to permit completion of the safety reviews. As Action Plan Decision Group C items are approved by the Commission, they would be added as requirements for CP and ML applicants.

All applicants for CPs and MLs for which staff SERs or SER TMI supplements are issued before January 1, 1982 would also be required to identify and provide the bases for all deviations from the acceptance criteria set forth in the May 1980 revision of the Standard Review Plan (SRP) (NUREG 75/087), and NUREG-0718 (as modified after public comment) prior to issuance of a Construction Permit or Manufacturing License. All applicants for CPs and MLs for which staff SERs or SER TMI supplements are issued after January 1, 1982 would be required to identify and provide the bases for all

deviations from the acceptance criteria set forth in the next revision of the Standard Review Plan (currently expected to be issued in April 1981) prior to issuance of a Construction Permit or Manufacturing License. The next revision of the Standard Review Plan will consist of the May 1980 revision of the SRP modified to reference all applicable safety and safeguards regulations and those Division 1 Regulatory Guides, staff positions, and other documents currently used by the staff to interpret the intent of these regulations, including requirements resulting from the TMI accident.

The information regarding identification and justification of deviations from the applicable revision of the SRP would be contained in those Safety Analysis Report sections that describe the systems, components, or structures in which the deviations exist. In addition, the applicants would provide, in Chapter 1, a summary listing of the deviations and an identification of the sections in the Safety Analysis Report where the deviations are described and justified. The identification and justification by CP and ML applicants of deviations from the acceptance criteria in the applicable revision of the SRP is expected to enhance the quality of the staff's review of the application and assist the staff in making the determinations required by

10 CFR 50. Such documentation would also more clearly identify the bases of the acceptability of the facility design and its relationship to current licensing criteria. Several methods of implementing this requirement are under consideration (issuance of a Regulatory Guide, issuance of a Policy Statement or issuance of rules changes). The Commission is also considering the imposition of similar requirements on holders of operating license and applicants for operating licenses. A Federal Register Notice for this class of licensee/applicant is to be issued in the near future.

Public comments are requested with respect to: (1) The four areas identified above for special consideration; (2) the requirements identified in NUREG 0718, and (3) the requirement to document and justify deviations from the applicable revision of the Standard Review Plan. Comments are also requested regarding the extent to which the judgments reached by the Commission on items (1) and (2) should form the basis for instructions to licensing and appeal boards in construction permit and manufacturing license proceedings. With respect to item (3), public comments regarding the method of implementation of the requirement are requested. Following receipt of public comments, the Commission will finalize its position and take appropriate action, including

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the possible issuance of final rules on some or all of these matters.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of Title 5 of the United States Code, notice is hereby given that amendment of the Commission's regulations in 10 CFR Parts 2 and 50 with regard to some or all of the subjects and issues described in this Notice is contemplated.

45 FR 65466

Published 10/2/80

Comment period expires 11/3/80

➤ (Correction Published 10/24/80)

### **Domestic Licensing of Production and Utilization Facilities; Interim Requirements Related to Hydrogen Control and Certain Degraded Core Considerations**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The accident at Three Mile Island, Unit 2, resulted in a severely damaged or degraded reactor core with the concomitant release of radioactive material to the primary coolant system and generation of hydrogen from fuel cladding-water reaction well in excess of the amounts required to be assumed for design purposes by the current Commission regulations. Furthermore, the accident revealed design and operational limitations that existed relative to mitigating the consequences of the accident and determining the status of the facility during and following the accident. The Nuclear Regulatory Commission (NRC) is therefore initiating a long-term rulemaking to consider to what extent, if any, nuclear power plants should be designed to deal effectively with degraded-core and core-melt accidents. In the interim, the Commission is considering amending its regulations to improve hydrogen management in light-water reactor facilities and to provide specific design and other requirements to mitigate the consequences of accidents resulting in a degraded reactor core.

**DATES:** Comment period expires November 3, 1980. Comments received after November 3, 1980 will be considered if it is practical to do so, but assurance of consideration cannot be given except as to comments filed on or before November 3, 1980.

**ADDRESS:** Written comments or suggestions for consideration in connection with the proposed

amendments should be submitted to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments received may be examined in the Commission's Public Document Room at 1717 H Street NW., Washington, D.C.

#### **FOR FURTHER INFORMATION CONTACT:**

Morton R. Fleishman, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, telephone 301-443-5921.

**SUPPLEMENTARY INFORMATION:** The recent accident at Three Mile Island, Unit 2 (TMI-2), resulted in a severely damaged or degraded reactor core with a concomitant release of radioactive material to the primary coolant system and a large amount of fuel cladding metal-water (zirconium-oxygen) reaction in the core with hydrogen generation well in excess of the amounts required to be considered for design purposes by 10 CFR § 50.44, Standards for combustible gas control system in light water cooled power reactors. The accident revealed design and operational limitations that existed relative to mitigating the consequences of the accident and determining the status of the facility during and following the accident. To correct this situation the Commission has decided to revise its regulations so as to incorporate improvements derived from studies of the TMI-2 accident. The initial findings relative to the TMI-2 accident have been published in NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations," dated July 1979, and NUREG-0585, "TMI-2 Lessons Learned Task Force Final Report," dated October 1979.\*

The NRC's Office of Nuclear Reactor Regulation has also sent letters to all licensees of operating nuclear power plants, operating license applicants, licensees of plants under construction and pending construction permit applicants, informing them of the followup actions that should be taken in light of the lessons learned from TMI-2. Specifically for all operating nuclear power plants, letters were sent on September 13, 1979 concerning "Followup Actions Resulting from the NRC Staff Reviews Regarding the Three Mile Island Unit 2 Accident," in which a set of recommendations was presented that was to be implemented. Regional meetings were held during the week of September 24, 1979 to explain in more detail each of the recommendations. On October 30, 1979, letters were again sent

\*Copies of these reports may be obtained from GPO Sales Program, Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

to all licensees of operating nuclear power plants to provide additional clarification of the NRC staff recommendations (Discussion of Lessons Learned Short Term Requirements).

The Commission has identified a number of recommendations that are specifically related to accidents that involve severely damaged or degraded reactor cores. These have been determined to be of such safety significance that they should be codified by regulation in order to provide assurance that the public health and safety will be adequately protected. The specific dates to be required for implementation by the proposed amendments have been revised from the dates in the previously mentioned letters. However, the implementation dates are being reconsidered during this phase of the rulemaking and specific comments on this subject are welcomed.

The following discussion provides the background information, justification and clarification of the amendments, relative to degraded core accidents, that are proposed to be adopted by the Commission in response to the TMI-2 accident. Additional specific guidance for complying with the proposed amendments may be found in the previously mentioned letters to licensees of operating nuclear power plants. The proposed amendments themselves are presented after the discussion. The discussion is organized in the same order as the proposed amendments for ease in convenient cross reference.

#### **Hydrogen Management (§ 50.44(c)(3) (i) and (ii))**

Section 50.44, Standards for combustible gas control system in light water cooled power reactors, requires a licensee or license applicant to show that, during the time immediately following a postulated loss-of-coolant accident (LOCA) but before effective operation of the combustible gas control system, either: (1) an uncontrolled hydrogen-oxygen recombination will not take place in the containment, or (2) the plant can withstand the consequences of uncontrolled hydrogen-oxygen recombination without loss of safety. If neither of these conditions can be shown, the containment must be provided with an inerted atmosphere or an oxygen deficient condition in order to provide protection against hydrogen burning and explosions during this time.

Section 50.44 gives credit to performance of the emergency core cooling system (ECCS) by specifying that the amount of hydrogen assumed to be contributed by the metal-water reaction shall be either five times the total amount of hydrogen calculated in demonstrating compliance with the



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ECSS acceptance criteria (§ 50.46, Acceptance Criteria for Emergency Core Cooling Systems for Light Water Nuclear Power Reactors) or an amount related to a specific depth of fuel clad reacted (approximately one percent of the fuel clad), whichever amount is greater. As a result, if a licensee or license applicant can show that the calculated metal-water reaction is well within the ECSS acceptance criteria (e.g., less than 0.5 percent of the fuel clad reacts which would be well within the 1.0 percent specified in the ECSS criteria), it is a straightforward task to demonstrate that there is no need to inert the containment of its plant, even if the plant has a small containment volume such as in a Mark I or Mark II boiling water reactor (BWR).

Most operating BWR plants with Mark I containments have been inerted due to guidance provided in an early version of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment following a Loss-of-Coolant Accident," in which the designs were required to accommodate five percent metal-water reaction during the LOCA blowdown. This guide was in effect prior to promulgation of § 50.44. The combination of containment volume and zirconium inventory of the BWR Mark I containments made it necessary to inert these containments to ensure that the hydrogen concentration in containment following a LOCA would not exceed the lower flammability limit of 4 volume percent in air. Section 50.44 and associated changes to Regulatory Guide 1.7 allowing credit for ECSS performance potentially reduced the amount of metal-water reaction that was required to be considered in the containment design. This permitted Hatch 2, a Mark I BWR plant located in Baxley, Georgia, and operated by the Georgia Power Co., to operate without inerting. In addition, it would permit Mark II BWR plants now in the operating license (OL) review process to operate without inerting. By a ruling of the Appeal Board (ALAB-229, September 18, 1974; 8 AEC 425 (1974)), inerting was not required for the Vermont Yankee plant, located in Vernon, Vermont, and operated by the Vermont Yankee Nuclear Power Corporation.

The Commission believes that pending completion of a long-term rulemaking proceeding related to consideration of degraded or melted cores in safety regulation, which will include a reevaluation of all positions on the inerting of reactor containments, it would be prudent, in the interim, to establish certain inerting requirements for operating plants and those that will

be operated in the near term as follows: (1) Mark I and II BWR containments be inerted. While the decrease in residual risk due to inerting these containments is small, as determined by probabilistic analyses, (a) there are no significant countervailing safety disincentives; (b) the cost of inerting is small; and (c) there has been substantial satisfactory experience with inerting Mark I containments. (2) Ice condenser containments for pressurized water reactor (PWR) plants not be inerted at this time. While inerting ice condenser containments would result in a greater decrease in the calculated residual risk, compared to BWR containments, there are significant reasons for not inerting such as, (a) inerting would result in an increased personnel hazard, since these containments must be entered frequently during routine operations for maintenance purposes; (b) inerting could lead to a decrease in safety performance of the ice condenser because of increased difficulty in maintenance; and (c) inerting is not within proven technology for this type of containment and would have to be thoroughly analyzed and tested (with likely changes in design) before imposing such a requirement. (3) Other PWR containments not be inerted at this time. While inerting would likely produce a small decrease in residual risk, any decrease would be substantially less than for Mark I or II BWR containments because of the substantially larger containment volumes and the fact that these containments can probably withstand higher pressures from hydrogen burns. Both of these considerations would permit substantially greater volumes of hydrogen to be generated.

The Commission is therefore considering amending § 50.44 to require that: (1) all operating Mark I BWRs be inerted; (2) Mark I and II BWRs now under construction be inerted upon operation; and (3) licensees now operating PWR plants or Mark III BWR plants, or license applicants that plan to operate these plants, study the various methods of controlling the behavior of large amounts of hydrogen before the containment is threatened, or of mitigating the consequences of accidents involving the generation of large amounts of hydrogen. These studies should take the adverse safety aspects of the design features as well as their costs into account, recognizing that tradeoffs may be necessary. They should cover a range that includes both the realistic (best estimate) ultimate strength of the containment as well as the conservative design basis. The maximum duration for hydrogen generation was specified to be eight

hours because it was felt this provided an adequate limit based on credible accident scenarios. It neglects the hydrogen generated by radiolytic decomposition which is more than adequately accounted for by the assumption used for the percent of fuel clad that reacts. For purposes of providing a reasonable bound to the studies, an upper limit of 75 percent should be used for the percent of fuel clad that reacts to produce hydrogen. As indicated previously, this can also account for the hydrogen that would be generated from other possible sources such as from the stainless steel steam reaction or radiolytic decomposition. The Commission will require that the studies include sensitivity analyses concerning the effects of different amounts of hydrogen, and that the methods to be considered for hydrogen control include but not be limited to: (1) inerting of containment; (2) use of hydrogen recombiners; (3) use of purge systems; (4) use of a halon suppressant system; (5) use of a filtered-vent system; (6) use of a hydrogen combustion system; (7) use of water fog spray; and (8) combinations of these. It is anticipated that, where appropriate, owners groups will be formed for similar facilities to perform these studies and thus eliminate duplication.

It should be noted that this proposed amendment will require that the Mark I containments for the Vermont Yankee and Hatch 2 BWR plants be treated in a manner similar to other operating BWR plants with Mark I containments. The first domestic BWR Mark II is scheduled for fuel loading in late-1980, and the first domestic BWR Mark III is scheduled for fuel loading about September 1981.

Additional information and discussion on the inerting of light-water-reactor containments may be found in SECY-80-107, "Proposed Interim Hydrogen Control Requirements for Small Containments," and SECY-80-107 A and B, "Additional Information Re: Proposed Interim Hydrogen Control Requirements,"\* and NUREG-0578 and NUREG-0585 which were referenced earlier.

The Commission realizes that amending § 50.44 to require inerting of Mark I and II BWRs does not settle the issue of how to treat degraded core accidents in general and hydrogen management in particular. There are numerous regulations which may be affected by the consideration of degraded core accidents. Some of these are Criteria 16 and 50 of Appendix A to 10 CFR Part 50, which are related to containment design, and § 100.11 of 10

\*Copies of those documents are available from the Commission's Public Document Room at 1717 H Street NW., Washington, D.C.

CFR Part 100, which is related to the siting of nuclear reactors. Also, the remainder of § 50.44, particularly in regard to the hydrogen generation assumptions, is not being considered for revision at this time. Since § 50.44(d) is not being changed, the hydrogen control system does not have to accommodate any more hydrogen than that associated with either five times the metal-water reaction calculated to occur during a postulated loss-of-coolant accident or a one percent metal-water reaction, whichever is greater. The Commission is performing a systematic review of all of its regulations from the standpoint of consistency relative to the treatment of degraded core accidents. Furthermore, the Commission has initiated a longer term rulemaking effort relative to consideration of degraded or melted cores in safety regulation that would identify, among other things, whether and to what extent designers need to consider degraded core accidents.

#### **Dedicated Hydrogen Control Penetrations (§ 50.44(c)(3)(iii))**

Paragraphs 50.44(d), (e), (f), and (g) of 10 CFR Part 50 require the incorporation of hydrogen recombiners or post-accident purge systems for the control of combustible gas concentrations inside containment, depending on the date of the notice of hearing on the application for the construction permit (CP) for the plant. All plants for which the CP hearing notice was published after November 5, 1970, must use combustible gas control systems such as hydrogen recombiners for the post-accident control of combustible gas in the containment building. Plants for which the notice of hearing was published prior to November 5, 1970, may use post-accident purging of the containment for combustible gas control depending on whether or not they meet certain site radiation dose criteria.

The TMI-2 plant had provisions for post-accident installation and operation of an external hydrogen recombiner for combustible gas control. However, the design of the external recombiner hookup at TMI-2 used the 36-inch containment penetrations for the normal containment purge system by tapping 4-inch lines off the purge lines outside the containment building between the building and the outer containment isolation valves. Operation of the hydrogen recombiner required the opening of the inboard 36-inch containment isolation valve in both a containment purge system inlet and outlet line. With this design, once the hydrogen recombiner is put into operation, containment integrity is vulnerable to a single active failure.

That is, a spurious or inadvertent opening of one of the 36-inch outboard containment isolation valves would result in the venting of the containment to the environment.

The purpose of this proposed amendment is to provide assurance that facilities with hookups for external recombiners or post-accident purge systems that are susceptible to single failures, and that would result in operation of the unit beyond its design capacity, have design modifications made to correct this situation. Systems designed to meet these proposed requirements would not provide through-line leakage paths between the containment atmosphere and the environment and would eliminate the possibility of violating the containment integrity through a single active failure during hydrogen recombiner or purge system operation.

#### **➤ Hydrogen Recombiner Capability (§ 50.44(c)(3)(iv))**

As discussed previously, existing regulations permit plants for which the notice of CP hearing was published prior to November 5, 1970 to use only purge systems for combustible gas control subject to certain site radiation dose criteria. Depending on the containment design for these plants, the design basis for the purge system would lead to a release of the containment atmosphere for long-term hydrogen control in a period of time varying from a few weeks to several months.

Recombiners designed to meet current Commission requirements are not capable of preventing the hydrogen combustion and the resultant containment pressure spike that occurred in the TMI-2 containment building during the course of the accident. However, had there not been the capability to use a recombiner at TMI-2, it is possible that under a different accident scenario venting of the highly radioactive containment atmosphere may have been necessary in the weeks following the start of the accident.

As indicated in the discussion under Hydrogen Management, the Commission has initiated a long-term rulemaking effort relative to consideration of degraded or melted cores in safety regulation. Part of this rulemaking will involve a thorough reevaluation of hydrogen generation and control including the design bases for current hydrogen recombiners. However, based on the TMI-2 experience, and the desire to reduce the likelihood of releasing significant amounts of radioactive material to the environment, the Commission believes that it would be

prudent to provide means for hydrogen control that do not involve venting to the atmosphere. Because recombiner technology is well established and relatively inexpensive, the Commission is considering amending its regulations (new § 50.44(c)(3)(iv)) to require that all plants that currently rely on venting as the primary means for combustible gas control be provided with the capability to install external hydrogen recombiners following the start of an accident. This will require the use of dedicated containment penetrations as well as appropriate shielding, electrical power and operational procedures. The recombiner capability would only be required to satisfy the combustible gas control requirements of § 50.44 and thus would not be required to have any more capability than that needed to control hydrogen resulting from at most a 5 percent metal water reaction. This would provide a long-term hydrogen control capability but not a capability to quickly reduce the concentration of large amounts of hydrogen such as was generated during the TMI-2 accident. The need for this capability will be addressed during the long-term rulemaking on consideration of degraded or melted cores in safety regulation.

#### **High Point Vents in the Reactor Coolant System (§ 50.44a(a))**

During the TMI-2 accident, a substantial volume of hydrogen was generated in the primary system. Helium fill-gas and fission product noble gases were also released. In other reactors under different circumstances, nitrogen, which drives the passive injection water system in PWRs, may also be a potential source of gas in the primary system. There is a concern that the accumulation of pockets of noncondensable gases in the primary system of a reactor may interfere with the natural circulation pattern that is regarded as an important safety feature in some accident sequences. In other sequences, pockets of noncondensable gases may interfere with pump operation. It has therefore been concluded that under certain circumstances it would be desirable to have provisions for venting noncondensable gases from high points in the primary system. The vents would have to be operable from a remote location, such as the control room.

Furthermore, the introduction of hydrogen from the primary system into the containment building can create a flammable atmosphere unless precautions are taken against this eventuality. Obviously, the decision to place such a vent system into operation



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would have to be made with the greatest care and restraint.

The purpose of this proposed amendment is: (1) to provide reactor coolant system and reactor vessel head high point vents remotely operable from the control room in reactors where these are not already in place; and (2) to provide assurance that the use of these vents will not further aggravate the challenge to containment or the course of the emergency. This proposed requirement is also interpreted to mean that other systems which may be required to maintain adequate core cooling such as the isolation condenser in BWRs, and the decay heat removal system, have the capability to be remotely vented if the accumulation of noncondensable gases would cause their loss of function. It is recognized that it is impracticable to vent each of the many thousands of tubes in a U-tube steam generator. Procedures should be developed which ensure that sufficient liquid or steam can enter the U-tube region so that decay heat can be effectively removed from the reactor coolant system. Proposed § 50.44a(g), "Training to Mitigate Degraded Core Accidents," includes plans and training for the use of the high point vents in emergency situations.

### Protection of Safety Equipment and Areas Which May Be Used During and Following an Accident (§ 50.44a(b)(1))

During and following an accident that results in a severely degraded core, a large amount of radioactive material may be released from the fuel as a result of cladding failure and be carried throughout the facility by the water in which it is dispersed, and by the circulating air. Systems that were not designed to contain large amounts of radioactive material, such as the auxiliary building at TMI-2, may become highly contaminated. The resulting radiation fields may make it difficult to effectively perform accident recovery operations or may impair the functioning of systems important to safety. These systems, although not specifically identified to perform post-accident functions, may nevertheless be of significant value after an accident. In addition, areas which may be used during and following an accident, such as control rooms, radwaste panels, emergency power supplies, and instrument areas may fall within the radiation fields of these systems.

Procedures for the use of these areas during and following an accident may be all that is necessary. In other instances, permanent or temporary shielding may be valuable. Remote instrument and control capability may

also solve some problems. Finally, the solution may require basic design improvements in the facilities, components or systems.

Areas that may be used during and following an accident should be provided with appropriate shielding and other radiation protection measures so that personnel performing necessary safety functions will not receive more than a 5 rem whole body dose or its equivalent to any part of the body. When determining anticipated personnel doses for the purpose of meeting this facility design criterion, care must be taken to determine the necessary occupancy time in a specific area. For example, areas in which there will be continuous occupancy are required to have much lower design dose rates than areas where minimal occupancy is expected. Therefore, the facility design should be based upon expected occupancy, as well as the radioactivity present and the shielding available.

The purpose of the proposed design requirement (§ 50.44a(b)(1)) is to facilitate operations during and following an accident in areas affected by systems that may contain abnormally high levels of radioactivity and to ensure that safety equipment in proximity to the resulting radiation fields is not unduly degraded. It should be noted that the radioactive material release specified in § 50.44a(b)(1)(i) represents the Commission's position at this time; however, this position will be reevaluated during the long-term rulemaking on consideration of degraded or melted cores in safety regulation.

### In-Plant Iodine Instrumentation (§ 50.44a(b)(2))

10 CFR Part 20 provides criteria for control of exposures of individuals to radiation in restricted areas, including airborne radioiodine. Since iodine concentrates in the thyroid gland, airborne concentrations must be known in order to evaluate the potential dose to the thyroid. If the airborne radioiodine concentration is overestimated, plant personnel may be needlessly required to perform operations while wearing respiratory protective equipment. Such action can sharply limit communication capability and may diminish personnel performance during an accident.

The concentration of radioiodine in air is determined by use of an iodine adsorbing cartridge through which air has been pumped. The cartridge is removed from the air pump and allowed to ventilate to permit any adsorbed noble gases to diffuse to the atmosphere. The cartridge is then analyzed for

radioactivity content, which is ascribed to radioiodine. While this procedure is conservative, it is possible for sufficient noble gas to be adsorbed and not released from the charcoal that the resulting radioiodine determination may be unduly conservative (high). Because the radioiodine concentration was greatly overestimated at TMI-2, plant personnel were required to perform their operations while wearing respiratory protective equipment when this use was not necessary. Actual concentrations were probably below levels requiring protective actions. One acceptable method to minimize this problem is to measure the radioiodine by gamma energy spectrum analysis. Equipment for these measurements is commercially available.

Effective monitoring of radioiodine levels in the building, under accident conditions, could include the use of portable analyzers and instruments. Alternatively, the capability should be provided to remove the filter sample to a low background, low contamination area, for analysis, to prevent measurement inaccuracies due to background radiation.

The purpose of the proposed requirement (§ 50.44a(b)(2)) is to improve the accuracy of measurement of airborne radioiodine concentrations within nuclear power plants.

### Sampling During and Following an Accident (§ 50.44a(c))

Timely information from reactor coolant and containment air samples can be important to reactor operators for their assessment of system conditions and can influence their subsequent actions to maintain the facility in a safe condition. During and following an accident, significant amounts of fission products may be present in the reactor coolant and containment air, creating high radiation levels throughout the facility. These high radiation levels may delay the obtaining of information from samples. The high background radiation, high sample radiation, and high levels of airborne contamination may render in-plant radiological spectrum analysis equipment inoperable during and after an accident.

At TMI-2, all of the above problems were encountered. There was no capability to obtain and analyze in a timely manner the reactor coolant and containment air samples under the existing accident conditions. The acquisition of reactor coolant and containment air samples was delayed for several days while personnel radiation protection precautions were taken. Once the samples were obtained,

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there were significant delays in performing the radiological spectrum analysis of the samples. The TMI-2 spectrum analysis equipment was inoperable because of high background radiation and the samples had to be packaged and flown to an offsite laboratory for analysis.

In summary, radiation levels at TMI-2 delayed acquisition of information to confirm that significant core damage had occurred. Prompt acquisition and analysis of reactor coolant samples within a few hours after the initial scram would have indicated that significant core damage had occurred. With such information, earlier remedial actions could have been taken. Similarly, analysis of an early containment air sample would have indicated the presence of hydrogen, and of radioisotopes indicating significant core damage, and the potential for a hydrogen explosion in the containment.

The sampling facilities are required to meet the design criteria of § 50.44a(c) as well as those of § 50.44a(b)(1). All sources of radiation should be considered in evaluating the designs, such as the sample lines, the samples themselves, and other radioactive lines near the sampling stations and analysis facilities.

### Leakage Integrity Outside Containment (§ 50.44a(d))

Several of the engineered safety features and auxiliary systems, located outside reactor containment, will or may have to function during a serious transient or accident with large radioactive inventories in the process fluids. The leakage from these systems, when operated, must be minimized or eliminated to prevent the release of significant amounts of radioactive materials to the environment. Examples of engineered safety features include residual heat removal, containment spray recirculation, and high-pressure injection recirculation. Examples of auxiliary systems include sampling, makeup and letdown, and waste gas. These systems are checked during pre-operational testing and startup testing but are not usually included in any periodic leak testing program. It is important that the plant operating staff know the leakage rates of these systems and minimize this leakage to the maximum extent practicable.

Some of these systems were used during the TMI-2 accident with resultant releases of radioactive materials to the auxiliary building ventilation systems. These releases are believed to have resulted from leaking relief valves, waste gas compressor seals, valves, manifold lines, and open rupture discs.

Uncertainties in the leakage rate of the residual heat removal system could have hindered its use if it had been needed. The lesson learned in this case was that more positive control and knowledge of the leakage rates of these systems is needed to provide the operating staff with the maximum usable equipment and to restrict or control the release of radioactive materials to the environment.

The purposes of this proposed amendment are to require that every reasonable effort be made to eliminate or reduce the leakage from these systems, to require that periodic tests are performed to ensure that the leakage from these systems is minimized to the maximum extent practicable, and to provide the plant staff with current knowledge of the system leakage rates.

### Accident Monitoring Instrumentation (§ 50.44a(e))

The accident at TMI-2 demonstrated that containment conditions can arise that are more severe than those that were postulated to occur during design basis accidents.

Approximately ten hours after the start of the accident at TMI-2, a 28-psig pressure spike occurred in the containment building. It is believed that the pressure spike was due to the rapid burning of hydrogen gas in the containment atmosphere. It is known that the pressure spike represented a serious condition within containment and that the pressure indication itself could have been, but was not then accepted as, critical information to the plant operators. The events at TMI-2 clearly reaffirm the need for containment pressure indication in the control room. The instrumentation range should extend from a lower limit of five psi below normal operational pressure to an upper limit of three times the design pressure for concrete containments and four times the design pressure for steel containments.

The sequence of events during the accident at TMI-2 indicate another item of information which could have been, but was not immediately accepted as, critical information in the diagnosis of the accident, namely the free liquid inventory in the containment building. During the accident, reactor primary coolant water vented through the drain tank relief valve and drained to the containment sump. Prior to containment isolation, water in the containment sump was discharged to the auxiliary building sump tank. Because containment sump pump operation had routinely occurred several times a day before the accident, the transfer process was not recognized as a potential source

of contaminated water in containment. Additionally, the accumulation of water in the TMI-2 containment probably contributed to equipment failure due to flooding. The events clearly establish a need for accurate containment water level indication in the control room, with instrument ranges which include maximum accident flooding levels.

The third item of information which was subsequently considered to be of critical importance in determining containment conditions at TMI-2 was a measurement of the hydrogen concentration in the containment atmosphere. Hydrogen gas was produced as a result of the reaction of zirconium metal from the fuel cladding and primary coolant water in the reactor core. The gas was vented from the reactor coolant system to the containment atmosphere. The free hydrogen in containment resulted in a rapid burn and pressure spike event in the containment. Samples of containment atmosphere were taken following the accident at TMI-2, but the process involved risk to workers and did not yield real-time information. The events clearly show that it is essential that the operator have continuous information about the containment atmosphere hydrogen concentration for indication of the need and use of reactor pressure vessel venting or containment combustible gas control systems.

Indication of containment pressure, containment water level, and hydrogen concentration in the containment atmosphere will provide critical information to the operator on containment conditions during and following an accident and should be qualified to the criteria for instrumentation important to safety. These parameters should be continuously provided and recorded in the control room of all nuclear reactor power plants.

The radiation level inside containment is closely related to the potential release of radioactive materials in the plant effluents. At TMI-2, the radiation monitor in containment had a range limit of  $10^6$  R/hr, which was adequate to meet the conditions of the accident. In reviewing the monitoring capabilities of other plants, however, it was found that there are few operating plants with instrumentation capable of measuring levels in excess of  $10^6$  R/hr. During the initial post-accident period at TMI-2, questions arose as to the validity of the instrument readout and to the operational characteristics of the instrument under the accident environment. The Commission considers that the high-level monitoring

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instrumentation in the containment at TMI-2 was adequate to measure the existing radiation levels; however, it also considers that the range limit of this instrumentation should be increased to **greater than  $10^4$  R/hr and consist of at least two channels, each separated physically from the other, and that the instrumentation system should be qualified to the criteria for instrumentation important to safety.**

Guidance on the ranges and specifications of the accident monitoring instruments discussed above can be found in proposed Revision 2 of Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident,"\* which is presently out of public comment.

Radioactive gaseous effluent monitors designed to operate under conditions of normal operation and anticipated operational occurrences do not have sufficient range to function under release conditions associated with certain types of accidents. General Design Criterion 64 of Appendix A to 10 CFR Part 50 requires that effluent discharge paths be monitored for radioactivity that may be released from postulated accidents. The gaseous effluent monitoring system for TMI was evaluated during the licensing review and was found to be adequate for calculated releases from previously postulated accidents; however, the TMI-2 experience gives rise to new postulated design basis accidents and their associated releases.

At TMI-2, the noble gas section of the gaseous radioactive effluent monitor serving the plant vent was designed to measure concentrations up to  $10^{-2}$   $\mu\text{Ci/cc}$  (Xe-133). During the initial phases of the accident, radioactive noble gas effluent monitor readings were off scale, with actual release concentrations calculated to be on the order of  $10^{-1}$   $\mu\text{Ci/cc}$  to 1  $\mu\text{Ci/cc}$ .

A section of the TMI-2 plant vent gaseous radioactive effluent monitor designed to detect and measure radioiodine releases, while remaining on scale, gave an erroneous indication of high radioiodine content in releases from the vent during the initial phases of the accident. The indication was caused by adsorption of short-lived noble gases in the charcoal cartridge, with the presence of the noble gases being read and erroneously interpreted as

radioiodine by the monitor readout system.

A similar condition existed in the section of the plant vent monitor designed to detect and measure the presence of particulate radioactive material in plant gaseous effluents. In this case, the presence of noble gases in the gas stream passing through the monitor's particulate filter was sufficient to cause the particulate section of the monitor to read off scale and erroneously indicate that large quantities of particulates were being released from the plant vent.

The problem is generic. A recent survey of existing radioactive gaseous effluent monitoring capabilities of operating plants shows that less than 20 percent of operating plants have monitors that would have stayed on scale under the conditions of the TMI-2 accident. Also, it can be shown that the potential releases from postulated accidents may be several orders of magnitude higher than was encountered at TMI-2. Under such circumstances, none of the effluent monitors now in service at any operating plant would remain on scale.

A requirement for effluent monitors to have an operating range sufficient to permit on-scale readings under accident conditions is needed to provide meaningful release information for offsite emergency actions. Examples of anticipated release points that should be monitored are: the auxiliary building, radwaste building, waste gas decay tanks, main condenser air ejector, BWR main condenser vacuum pump exhaust, PWR steam safety valves and atmosphere steam dump valves, and BWR turbine building. Other examples would be areas that communicate directly with systems which may contain primary coolant or containment gases, such as letdown and emergency core cooling systems, and external hydrogen recombiners.

Based on data submitted by plant operators, the installed capability exists for monitoring noble gas releases up to a concentration of approximately  $1 \times 10^3$   $\mu\text{Ci/cc}$ , which is a factor of  $10^5$  higher than the maximum range of the instrumentation in use at TMI-2.

It has been calculated that the maximum concentration of undiluted noble gases which could be present in effluent gaseous releases is on the order of  $10^5$   $\mu\text{Ci/cc}$ . The Commission considers the upper detection limit of  $10^5$   $\mu\text{Ci/cc}$  for noble gases to be technically achievable. Guidance on the ranges and specifications for the required instruments can be found in proposed Revision 2 of Regulatory Guide 1.97.

The Commission understands that technological problems exist in monitoring of radioactive particulates and radioiodines in accident level releases, at calculated maximum radioiodine concentrations on the order of  $10^3$   $\mu\text{Ci/cc}$ . It has therefore concluded that sampling of plant gaseous effluents, with laboratory analysis of samples subsequent to release, is the only currently valid technique for monitoring accident level releases of radioiodines and particulates. The proposed amendment would require that this technique be used until on-line monitoring capability for accident level releases is developed. Existing radioiodine effluent monitoring equipment should be used to monitor radioiodine releases within instrumentation design limitations, with sampling and analysis being used to extend monitoring capabilities to accident levels.

### **Detection of Inadequate Core Cooling (§ 50.44a(f))**

During the TMI-2 accident, the condition of low water level in the reactor vessel and inadequate core cooling was not recognized for a long period of time. This problem was the result of a combination of factors including an insufficient range of existing instrumentation, inadequate emergency procedures, inadequate operator training, unfavorable instrument location (scattered information), and perhaps insufficient instrumentation. The instrumentation already available on some operating reactors that could indicate inadequate core cooling includes core exit thermocouples, cold leg and hot leg resistance temperature detectors (RTDs), in-core neutron detectors, ex-core neutron detectors, and reactor coolant pump current meters. Generally, such systems were included in the reactor design to perform functions other than monitoring of core cooling or indication of vessel water level. The as designed and field-modified instrumentation at TMI-2 did not provide sufficient information to indicate reduced reactor vessel coolant level, core voiding, and deteriorated core thermal conditions to the reactor operators at the time of the accident, although, in retrospect, this could be inferred from the instrument records. An additional diagnostic tool that was not available was a continuous indication of the margin to saturated conditions in the primary coolant. A meter to provide this information is proposed to be required for all PWRs.

The purpose of this proposed amendment is to provide the reactor

\*Copies of this draft regulatory guide may be obtained from the Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.



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operator with instrumentation, procedures, and training necessary to readily recognize and implement actions to correct or avoid conditions of inadequate core cooling.

### Training to Mitigate Degraded Core Accidents (§ 50.44a(g))

The TMI-2 accident has pointed out the need to improve the capability to recognize, diagnose, control and mitigate the consequences of accidents resulting in a degraded reactor core. That is, the operating personnel should have the capability to respond to events that are more severe than those transients and accidents considered as the design basis for the plant.

The purpose of this proposed amendment is to require additional training, for all operating personnel, specifically in relation to accidents involving a degraded core. This training will prepare the operating personnel to use all the available instrumentation and equipment to properly respond to such accidents.

In addition to the proposed interim rulemaking, the Commission has initiated a long-term rulemaking in which it is considering whether and to what extent its regulations should be amended to deal effectively with a broad range of accidents involving a reactor whose core has been degraded or melted. As part of the long-term rulemaking, an advance notice of proposed rulemaking has been issued soliciting comments on certain specific questions. Any views and comments submitted in response to this notice of proposed interim rulemaking will also be considered, along with comments submitted in response to the advance notice of proposed rulemaking, in the overall long-term rulemaking related to consideration of degraded or melted cores in safety regulation. Pending completion of the long-term rulemaking, it is the Commission's judgment that implementation of the requirements hereby being proposed will, in the interim, provide sufficient assurance that the health and safety of the public will be adequately protected relative to degraded core accidents. Other documents which support this position are SECY-80-107, 107A, 107B, NUREG-0578 and NUREG-0585 which were referenced previously.

(Separate views of Commissioners Gilinsky and Bradford are attached.)

Accordingly, notice is hereby given that, pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of title 5 of the United States Code, adoption of the following

amendments to 10 CFR Part 50 are contemplated.

### PART 50—DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

1. Section 50.44 of 10 CFR Part 50 is amended by revising paragraph (c) to read as follows:

#### § 50.44 Standards for combustible gas control system in light water cooled power reactors.

(c)(1) For each boiling or pressurized light-water nuclear power reactor fueled with oxide pellets within cylindrical zircaloy cladding, it shall be shown that during the time period following a postulated LOCA but prior to effective operation of the combustible gas control system, either: (i) An uncontrolled hydrogen-oxygen recombination would not take place in the containment; or (ii) the plant could withstand the consequences of uncontrolled hydrogen-oxygen recombination without loss of safety function.

(2) If neither of these conditions can be shown, the containment shall be provided with an inerted atmosphere or an oxygen deficient condition in order to provide protection against hydrogen burning and explosions during this time period.

(3) However:

(i) As soon as practicable but not later than June 30, 1981, an inerted atmosphere shall be provided for each boiling light-water reactor facility for which the application for a construction permit was docketed between March 15, 1964 and July 1, 1972; and

(ii) Design analyses shall be performed (A) for each boiling light-water reactor facility for which the application for a construction permit was docketed after July 1, 1972 and, (B) for each pressurized light-water reactor facility, to evaluate measures that can be taken to mitigate the consequences of large amounts of hydrogen generated within 8 hours after the start of an accident (hydrogen resulting from the reaction of up to about 75 percent of the fuel cladding with water). These design analyses and a proposed design (or designs) to mitigate the consequences of hydrogen in containment shall be completed and submitted to the Commission by (6 months from effective date of rule) or the date of docketing of the application for the operating license, whichever is later.

(iii) By June 30, 1981, facilities that rely upon external recombiners or purge systems to satisfy the requirements of § 50.44 shall be provided with containment penetrations for the

external recombiners or purge systems that either:

(A) are dedicated to that service only, conform to the requirements of Criteria 54 and 56 of Appendix A, are designed against an assumed single failure, and are sized to satisfy the flow requirements of the external recombiners or purge systems, or

(B) are of a combined design for use by either external recombiners or purge systems and other systems, conform to the requirements of Criteria 54 and 56 of Appendix A, are designed against an assumed single failure both for containment isolation purposes and for operation of the external recombiners or purge systems, and are sized to satisfy the flow requirements of the external recombiners or purge systems.

(iv) By January 1, 1982, facilities that rely upon purge systems as the primary means for controlling combustible gases following a LOCA shall be provided with the capability to install external recombiners following the start of an accident that meet the combustible gas control requirements of § 50.44. The containment penetrations that are used must meet the criteria in paragraphs (c)(3)(iii)(A) and (c)(3)(iii)(B) of this section applicable to external recombiners.

2. A new § 50.44a is added to 10 CFR Part 50 to read as follows:

#### § 50.44a Design requirements to mitigate the consequences of accidents resulting in a degraded core.

(a) *High Point Vents.* By January 1, 1982, each boiling and pressurized light-water nuclear power reactor shall be provided with reactor coolant system and reactor vessel head high point vents<sup>1</sup> remotely operated from the control room to provide improved operational capability for maintaining adequate core cooling following an accident. Since these vents form a part of the reactor coolant pressure boundary, the design of the vents and associated controls, instruments and power sources must conform to the requirements of Appendix A and Appendix B. In particular, these vents shall be designed in such a way that no single failure could result in either (1) a loss of the capability of the vents to perform their safety functions or (2) inadvertent actuation of a vent.

(b)(1) *Protection of Safety Equipment and Areas Which May be Used During and Following an Accident.* By January 1, 1982, each boiling and pressurized light-water nuclear power reactor shall

<sup>1</sup> Except that the tubes in U-tube steam generators do not require venting.



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be provided with both adequate access to areas which may be used during and following an accident and protection of safety equipment so that an accident, which results in the release of large amounts of radioactive material, will not limit personnel occupancy or degrade safety equipment, by the radiation fields that may exist during and following the accident, to the extent that required safety functions cannot be accomplished.

(i) The facility design must be based on a release of radioactive material from the fuel to the primary coolant system that is not less than 100% of the core equilibrium noble gas inventory, 50% of the core equilibrium halogen inventory, and 1% of the remaining core fission products. For equipment and areas affected by the reactor coolant, it shall be assumed that the above distribution of radioactive material is intimately mixed with the coolant water. For equipment and areas affected by the containment atmosphere, it shall be assumed that not less than 100% of the core equilibrium noble gas inventory and 25% of the core equilibrium halogen inventory are uniformly dispersed in the containment atmosphere and an additional 25% of the core equilibrium halogen inventory and 1% of the remaining core fission products are uniformly distributed on surfaces exposed to the containment atmosphere.

(ii) The facility design must be such that an individual operator will not receive more than a 5 rem whole body dose, or its equivalent to any part of the body, while performing a necessary safety function during and following an accident.

(2) *In-Plant Iodine Instrumentation.* By January 1, 1981,<sup>a</sup> each boiling and pressurized light-water nuclear power reactor shall be provided with instrumentation, equipment and associated training and procedures for determining, under accident conditions, the airborne radioiodine concentration in areas within the facility where plant personnel may be present during and following an accident.

(c) *Sampling During and Following an Accident.* By January 1, 1982, each boiling and pressurized light-water nuclear power reactor shall be provided with the capability for personnel to obtain and quantitatively analyze a reactor coolant or containment atmosphere sample during and following an accident.

(1) The facility design must be based on the radioactive material release

terms described in paragraph (b)(1)(i) of this section.

(2) The capability to obtain a sample must include the capability for doing so, promptly, and without incurring a radiation exposure to any individual in excess of 3 rem to the whole body, or its equivalent to any part of the body.

(3) The capability to quantitatively analyze a sample must be based on the use of either in-line monitoring or an onsite radiological and chemical analysis facility, and must provide, as needed, quantification of the following:

(i) Those radioisotopes necessary to determine the degree of core damage;

(ii) Hydrogen in the containment atmosphere;

(iii) Total dissolved gases and dissolved hydrogen gas in the reactor coolant;

(iv) Boron in the reactor coolant; and

(v) Chloride in the reactor coolant.

(d) *Leakage Integrity Outside*

*Containment.*

(1) Each boiling and pressurized light-water nuclear power reactor licensee shall implement leak reduction measures so that leakage from systems outside containment (systems that would or could contain highly radioactive fluids during and following a serious transient or accident) is eliminated or minimized to the maximum extent practicable to prevent the release of significant amounts of radioactive material during and following an accident. Consideration shall be given to reductions of potential release paths that could result from design or operator deficiencies.

(2) Each boiling and pressurized light-water nuclear power reactor licensee shall establish and implement a program of preventive maintenance to eliminate or minimize, to the maximum extent practicable, leakage from systems outside containment. This shall include periodic integrated leak tests at intervals not to exceed each refueling cycle as well as the reduction of potential release paths by appropriate operator training.

(e) *Accident Monitoring Instrumentation.* Each boiling and pressurized light-water nuclear power reactor shall have the capability during and following an accident for:

(1) Providing and recording in the control room a continuous indication of:

(i) Containment pressure by January 1, 1981<sup>a</sup>;

(ii) Hydrogen concentration in the containment atmosphere by October 1, 1981;

(iii) Containment water level by January 1, 1981<sup>a</sup>;

(iv) Containment radiation level by October 1, 1981;

(v) Radioactive noble gas concentrations in the effluents by October 1, 1981; and

(2) Quantifying the concentration of radioiodines and radioactive particulates in the airborne effluents at each anticipated release point by October 1, 1981.

(3) All the instruments and monitoring systems used for accident monitoring shall be designed and qualified (with extended ranges) to perform their function following an accident characterized by the radioactive material release terms described in paragraph (b)(1)(i) of this section.

(f) *Detection of Inadequate Core Cooling.*

(1) Each boiling and pressurized light-water nuclear power reactor licensee shall develop and implement procedures and training to be used by the operators to recognize the existence of inadequate core cooling and low coolant level in the reactor core using available instrumentation.

(2) Each pressurized light-water nuclear power reactor shall be provided with a primary coolant saturation meter (subcooling meter) that provides in the control room a continuous, recorded, on-line indication, of the primary coolant saturation condition.

(3) By January 1, 1982, each boiling and pressurized light-water nuclear power reactor shall be provided with instrumentation such as a reactor vessel water level indicator which supplies to the control room a recorded, unambiguous, direct indication, of inadequate core cooling. The indication must cover the complete range from normal operation to complete core uncovering and give advance warning of the approach of inadequate core cooling.

(4) All instruments used to detect the existence of inadequate core cooling shall be designed and qualified to perform their function following an accident characterized by the radioactive material release terms described in paragraph (b)(1)(i) of this section.

(g) *Training to Mitigate Degraded Core Accidents.* By April 1, 1981, each boiling and pressurized light-water nuclear power reactor licensee shall include in its training program for all operating personnel training to recognize, control and mitigate the consequences of accidents in which the core is severely damaged. The training shall include the use of all available structures, systems and components that can control or mitigate degraded core accidents.

(Secs. 103, 161b., Pub. L. 83-703, 68 Stat. 936, 948; Sec. 201, as amended, Pub. L. 93-438, 88 Stat. 1242 (42 U.S.C. 2133, 2201(b), 5841).)

<sup>a</sup> Or 30 days after the effective date of the rule, whichever is later.

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### Commissioner Gilkinsky's Separate Views Regarding Publication of the Proposed Rule—Interim Requirements Related to Hydrogen Control and Certain Degraded Core Considerations

As the summary of this Federal Register Notice states at the outset, "the accident at Three Mile Island, Unit 2, resulted in . . . generation of hydrogen from fuel cladding-water reaction well in excess of the amounts required to be assumed for design purposes by the current Commission regulations." Yet, in approving this Notice, the Commission in effect proposes to retain the outdated regulations. The proposed rule does little more in the area of hydrogen control than to prevent elimination of a protective measure now in place—use of a nitrogen atmosphere in the containment of boiling water reactors to prevent hydrogen burning—where such elimination might be permitted by current regulations. In the case of pressurized water reactors with ice condenser containments and the latest design boiling water reactors the proposed rule does not advance the level of protection at all. It is this aspect of the proposed rule that I disagree with.

The existing rule (10 CFR 50.44) is based on a view that only a small amount of hydrogen can be generated during an accident. Prior to the Three Mile Island accident, reaction of as much as one percent of the reactor fuel's zirconium cladding with water was regarded as extremely unlikely, even in a major loss of coolant accident. Now we know that larger quantities of hydrogen might be generated in lesser accidents—as much as 50 percent of the zirconium cladding in the TMI-2 core is estimated to have reacted with water thereby releasing several hundred kilograms of hydrogen to the containment. In proposing not to require additional hydrogen control measures in ice condenser containments, the staff and Commission have argued that the changes brought about after the Three Mile Island accident have now really made the probability of generating large quantities of hydrogen insignificant. That assumes a rather more complete understanding of the operational characteristics of large power reactors than I believe experience shows. The Commission should have proposed that all power reactors demonstrate an ability to cope effectively with amounts of hydrogen roughly comparable to that generated at Three Mile Island.

Commissioner Bradford agrees with these comments except for the statement suggesting that the publication of the rule for comment "in effect proposes to retain the outdated regulations."

45 FR 65474

Published 10/2/80

Comment period expires 12/31/80

>>(Correction Published 10/24/80)

### 10 CFR Part 50

#### Domestic Licensing of Production and Utilization Facilities; Consideration of Degraded or Melted Cores in Safety Regulation

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Advance notice of proposed rulemaking.

**SUMMARY:** The U.S. Nuclear Regulatory Commission is considering amending its regulations to determine to what extent commercial nuclear power plants should be designed to cope with reactor accidents beyond those considered in the current "design basis accident" approach. In particular, this rulemaking would consider the need for nuclear power plant designs to be evaluated over a range of degraded core cooling events with resulting core damage and the need for design improvements to cope with these events.

This advance notice of proposed rulemaking is being issued to invite advice and recommendations on several questions concerning design and operational improvements for dealing with degraded core cooling. Therefore, the preliminary views expressed in this notice may change in light of comments received. In any case, there will be an opportunity later for additional public comment in connection with any proposed rule that may be developed by the Commission.

**DATES:** The comment period expires December 31, 1980.

**ADDRESSES:** Interested persons are invited to submit written comments and suggestions to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments received by the Commission may be examined in the Commission's Public Document Room at 1717 H Street NW., Washington, D.C. Comments may also be delivered to Room 1121, 1717 H Street NW., Washington, D.C., between 8:15 a.m. and 5:00 p.m.

### FOR FURTHER INFORMATION CONTACT:

M. S. Medeiros, Jr., Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 or telephone (301) 443-5913.

### SUPPLEMENTARY INFORMATION:

#### Historical Background

The Nuclear Regulatory Commission (NRC) is responsible for licensing and regulating nuclear power plants. Before a nuclear power plant can be built at a particular site, a construction permit must be obtained from the NRC. As a major part of the application for a construction permit, the applicant files a Safety Analysis Report. This report presents the design criteria and preliminary design information for the proposed nuclear power plant and provides information on the proposed site. The report also discusses various abnormal conditions and accident situations and describes safety features to be provided to prevent accidents or, if they should occur, to mitigate their effects on public health and safety.

In nuclear power plants, large amounts of radioactive material are generated during fission of nuclear reactor fuel. Although this radioactive material generally remains in the fuel pellets, significant amounts can be released to the reactor coolant during accident conditions. For appreciable amounts of radioactive material to be released from the fuel, it must experience damage from one or more of several possible causes. For example, a hydraulic-mechanical accident at normal fuel temperatures can burst fuel cladding resulting in release of radioactive material normally retained in the gap between the fuel pellets and the fuel clad. A more serious type of accident involving higher fuel temperatures might, in addition to rupturing fuel cladding, cause oxidation of the cladding. This, in turn, would cause hydrogen to be generated and released which would compound the severity of the accident. A still more serious accident might involve very high fuel temperatures and oxidation of a large fraction of the core's zirconium. In this case, not only would large amounts of hydrogen be released to the containment building, but other thermal reactions could result in the release of radioactive material normally held captive in the fuel pellets. Finally, an accident so severe that core melting occurs could release large amounts of radioactive material to the environment if reactor containment integrity were also to be lost.

Based on these considerations, a broad range of nuclear power plant abnormal conditions and accidents with

the potential to cause fuel clad damage and release of radioactive material to the environment has been identified and categorized for analysis. Attempting to prevent abnormal conditions and accidents and mitigating their potential consequences have been the primary objectives of nuclear power plant safety design. The Safety Analysis Report is a key analysis document supporting the adequacy of this aspect of nuclear power plant design.

As discussed in Title 10, Chapter 1, Code of Federal Regulations, § 50.34(a), in the Safety Analysis Report the applicant is required to determine margins of safety for both normal and abnormal operations and to determine "the adequacy of structures, systems, and components provided for prevention of accidents and the mitigation of the consequences of accidents." To assist the applicant in complying with this regulation, the NRC has published Regulatory Guide 1.70, Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants,<sup>1</sup> which describes the information to be provided in the Safety Analysis Report. In particular, section 15 of Regulatory Guide 1.70 provides guidance to an applicant concerning "design basis assumptions acceptable to the NRC for purposes of determining adequacy of the plant design to meet 10 CFR Part 100 criteria." Regulatory Guide 1.70 explains that these design basis assumptions can, for the most part, be found in regulatory guides that deal with radiological releases and suggests use of Regulatory Guides 1.3 and 1.4, Assumptions Used for Evaluation of the Potential Radiological Consequences of a Loss-of-Coolant Accident.<sup>1</sup> Regulatory Guide 1.70 further states that "This analysis should be referred to as the 'design basis analysis.'" Operating events corresponding to design basis assumptions are termed "design basis accidents," and satisfactory analysis conclusions concerning them allow a judgment that the facility can be operated without undue risk to the health and safety of the public.

It should be noted that these events are analyzed primarily for the purpose of establishing the adequacy of engineered safety features, such features being those structures, systems, and components, designed into a plant to mitigate the consequences of postulated design basis accidents, and which supplement other plant features designed to meet performance specifications for normal operations and anticipated abnormal conditions.

In the Safety Analysis Report the applicant is not required, however, to explicitly analyze accidents more severe than the design basis accidents.<sup>2</sup> This approach was based on the assumption that such accidents are of sufficiently low probability that mitigation of their consequences is not necessary for public safety. This low probability was thought to result from the "defense in depth" approach that requires conservative design, multiple physical barriers, quality assurance for design, manufacture and operation, and continued surveillance and testing to prevent such accidents.

Furthermore, in reviewing reactor plant designs using the "design basis accident" approach, the NRC does not review all structures, systems, and components but rather reviews, in varying levels of detail, only those considered "safety grade" by the applicant submitting a Safety Analysis Report. Items considered by the applicant to be outside the scope of design basis accident analyses are generally not considered to be "safety grade" and are not reviewed by the NRC to see whether they will perform as intended or meet various dependability criteria. This method of classification is based on the notion that things credited in the analysis of a design basis event or specified in the regulations are important to safety and thus are "safety grade" while all else is "non-safety grade." Non-safety grade items do not receive continuing regulatory supervision or surveillance to see that they are properly maintained or that their design is not changed in some way that might interact negatively with other systems. Instead, these items simply receive what attention may be dictated by routine industrial codes and by desires to enhance plant availability.



Historically, a further assumption in design review and licensing was that if reactor plant systems can handle large-scale design basis accidents, they can also handle a spectrum of smaller accidents that are regarded as being "within the design envelope."

The accident at Three Mile Island resulted in core damage more severe than that considered in current design

basis events<sup>4</sup> and has shown the need to re-examine these historical approaches to analyzing reactor plant design and plant accidents. The October 1979 Report of the President's Commission on the Accident at Three Mile Island<sup>5</sup> recommended that in-depth studies be initiated on the probabilities and consequences (onsite and offsite) of nuclear power plant accidents, including the consequences of core meltdown. This report recommended that these studies include a variety of small-break, loss-of-coolant accidents and multiple-failure accidents, with particular attention to human failures. The report stated that "from these studies may emerge desirable modifications in the design of plants that will help prevent accidents and mitigate their consequences. For example consideration should be given to equipment that would facilitate the controlled safe venting of hydrogen gas from the reactor cooling system," and "consideration should be given to overall gas-tight enclosure of the let-down/make-up system with the option of returning gases to the containment building."

Similarly, the January 1980 report, Three Mile Island, A Report to the Commissioners and to the Public,<sup>6</sup> states, " \* \* \* we have come far beyond the point at which the existing, stylized design basis accident review approach is sufficient. The process is not good enough to pinpoint many important design weaknesses or to address all the relevant design issues. Some important accidents are outside or are not adequately assessed within the 'design envelope'; key systems are not 'safety related'; and integration of human factors into the design is grossly inadequate."

#### Commission's Intentions

Accordingly, it is the Commission's intent to determine what changes, if any, in reactor plant designs and safety analyses are needed to take into account reactor accidents beyond those considered in the current design basis accident approach. Accidents under consideration include a range of loss-of-core-cooling, core damage, and core-melting events both inside and outside historical design envelopes. Furthermore, the Commission will

<sup>1</sup> There are other design requirements which would presuppose events where significant core damage and release of radioactive material has occurred. For example, radioactive source terms of Technical Information Document TID-14844, Calculation of Distance Factors for Power and Test Reactor Sites,<sup>3</sup> which imply a major reactor accident, are used to judge design adequacy of various engineered safety features and certain other plant systems and components.

<sup>2</sup> Available from National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22151.

<sup>4</sup> However, there was no release of fission products from the core more severe than that presumed in 10 CFR Part 100 or TID-14844.

<sup>5</sup> "The Need for Change: The Legacy of TMI," available from the U.S. Government Printing Office, Washington, D.C. 20402.

<sup>6</sup> Copies may be obtained from the GPO Sales Program, Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

<sup>1</sup> Available from the U.S. Nuclear Regulatory Commission, Washington, DC 20555



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consider whether to require more coherent consideration of this range of core damage events in the design of both normal operating systems and engineered safety features. Therefore, this advance notice of proposed rulemaking is being published to provide the regulated industry and the public an opportunity to provide advice and recommendations to the Commission on what should be the content of a regulation requiring improvements to cope with degraded core cooling and with accidents not covered adequately by traditional design envelopes. The rulemaking proceeding will address the objectives of such a regulation, the design and operational improvements being considered, the effect on other safety considerations, and the costs of such design improvements compared to expected benefits.

Recognizing the need for prompt action to correct specific deficiencies identified during the Three Mile Island accident and subsequent investigations, the Commission is publishing a proposed interim rule that would require certain interim improvements to better cope with degraded reactor cores. That proposed interim rule should not be viewed as prejudging the final action concerning this advance notice of proposed rulemaking, and comments should be framed accordingly.

In addition to this *Federal Register* Notice, the Commission's Office of Standards Development is making a direct mailing to affected licensees and other known interested persons to ensure that they are aware of this advance notice of proposed rulemaking.

### Summary of Features Being Considered for Proposed Rule

The Commission is considering initiating rulemaking that would require that a broader range of accidents of both lesser and greater severity than the design basis accident, including a fully melted core, be considered in plant design, plant operation, and reactor safety analyses.

### Specific Considerations

Advice and recommendations on a proposed rule reflecting the foregoing feature and on any other points considered pertinent are invited from all interested persons. Comment is also invited on the extent to which any additional measures should be backfitted. Comments and supporting reasons are particularly requested on the following questions:

1. If loss of core cooling and resultant core damage occur in a nuclear power plant, there are certain predictable consequences. Can these consequences

be mitigated substantially, and the risk of severe public health danger thereby reduced substantially, by practical design improvements? If not, why not, or, if so, what design improvements can be made and at what estimated cost? How would your recommendations affect other safety considerations?

"2. The Three Mile Island accident was terminated after the core was damaged severely but before substantial melting occurred, a condition beyond the current design-basis-accident events considered in the safety analysis. Should the NRC require that events of this type be considered in future safety analyses? If not, why not, or, if so, what criteria would you impose to judge design acceptability?

"3. Although the consequences of core-melt accidents have been considered to some extent in assessing nuclear power plant safety, such as in requirements for siting, emergency response plans, and certain engineered safety features, explicit consideration of the capability of current designs and casualty procedures to cope with core-melt accidents has not been a part of safety analysis scrutiny by the NRC. Should core-melt accidents be specifically evaluated in safety analysis reviews, and, if so, to what extent, or, if not, why not?

"4. Recognizing that there can never be complete assurance that only analyzed events as delineated in a Safety Analysis Report will occur, what additional analyses, procedures, or design features would you propose to mitigate fuel damage accidents in the range from extensive clad perforation without oxidation, through a few percent clad oxidation, through extensive oxidation to full core meltdown? Would you recommend different and perhaps overlapping design features depending on the severity of core damage to be coped with?

5. To what extent should reactor design and reactor safety analysis account for engineered safety features not working at all, not working well, or being defeated by the operator, resulting in severe core damage? What limits should be placed on multiple failure and operator error assumptions made in safety analyses and how should probabilistic risk assessment be used to determine these limits?

6. Should the NRC require construction, at each nuclear reactor plant site, of a new structure for controlled filtered venting of the reactor containment structure? Would you limit the function of such a new structure to filtering particulates, elemental iodine, and inorganic iodine or would you include adsorption bed systems using

charcoal or other processes so that organic iodine and noble gases could also be trapped? What quantities and release rates of gases and particulates would you design such a structure to handle and at what removal efficiency and cost? Do the potential reductions in risk expected from such a structure offset potential increases in risk that

may materialize from incidents such as inadvertent operation or the concentration of hydrogen in the filtering apparatus?

7. Should the NRC require incorporation into containment design, systems for controlling combustion of hydrogen? Do you favor methods of control that suppress combustion or do you favor controlled burning? If you favor suppression of combustion, what techniques would you recommend and should they vary as a function of the design capability of current containments? If you favor controlled burning, do you recommend open flames, spark plugs, catalytic combustors, or some other means? What percent of zirconium oxidation in the core and at what rate would you design for? Would you respond differently for different reactor or containment types? If so, what differences would you recommend?

8. Would you recommend that all nuclear power plants operate with a nitrogen-enriched containment atmosphere as some BWR plants currently do? Why or why not and, if not, to which types of containment, if any, would you limit required nitrogen enrichment?

9. Should the NRC require incorporation into containment design, a core retention system to mitigate the consequences of core meltdown by, for example, increasing resistance to molten core debris penetration and thereby substantially reducing gas, vapor and aerosol generation to less than that which occurs when core debris is allowed to interact with concrete? Assuming a core retention system is required, do you favor a device that delays melt-through of the containment basemat, or a device that permanently retains core debris within the containment building? If you favor delay of core melt-through, do you recommend refractory materials (such as MgO, ZrO<sub>2</sub>) to protect the containment concrete basemat, or do you recommend some other means? If you favor permanent retention of core debris, do you recommend using refractory materials in combination with cooling systems that rely either on natural convective cooling or forced pumping of coolant around the extremities of the



## PART 70 • PROPOSED RULE MAKING

for new models. Consideration will be given to reducing the scope of protocols for further implants of models of demonstrated reliability. Accordingly, where it is desirable to select a pacemaker with the longest possible life, the patient and the patient's physician will have the option of selecting a plutonium-238 pacemaker.

The Commission is publishing, concurrently with this notice, withdrawal of its notice of proposed amendment of 10 CFR Part 150 that would have made the Commission the sole agency regulating the routine use of plutonium-238 in cardiac pacemakers.

### ➤ 45 FR 70874

Published 10/27/80

Comment period expires 12/11/80

*Exemption of Technetium-99 and  
Low-Enriched Uranium as Residual  
Contamination in Smelted Alloys*

See Part 30 Statements of Consideration



## PART 73 • PHYSICAL PROTECTION OF PLANTS AND MATERIALS

(b) *Physical barriers.* (1) The licensee shall locate vital equipment only within a vital area, which, in turn, shall be located within a protected area such that access to vital equipment requires passage through at least two physical barriers. More than one vital area may be within a single protected area.

(2) The licensee shall locate material access areas only within protected areas such that access to the material access area requires passage through at least two physical barriers. More than one material access area may be within a single protected area.

(3) The physical barrier at the perimeter of the protected area shall be separated from any other barrier designated as a physical barrier within the protected area, and the intervening space monitored or periodically checked to detect the presence of persons or vehicles so that the facility security organization can respond to suspicious activity or to the breaching of any physical barrier.

(4) An isolation zone shall be maintained around the physical barrier at the perimeter of the protected area and any part of a building used as part of that physical barrier. The isolation zone shall be monitored to detect the presence of individuals or vehicles within the zone so as to allow response by armed members of the licensee security organization to be initiated at the time of penetration of the protected area. Parking facilities, both for employees and visitors, shall be located outside the isolation zone.

(5) Isolation zones and clear areas between barriers shall be provided with illumination sufficient for the monitoring required by paragraph (b) (3) and (4) of this section, but not less than 0.3 foot candles.

(c) *Access requirements.* The licensee shall control all points of personnel and vehicle access into a protected area, including shipping or receiving areas, and into each vital area. Identification of personnel and vehicles shall be made and authorization shall be checked at such points.

(1) At the point of personnel and vehicle access into a protected area, all individuals, except employees who possess an NRC or United States Department of

Energy access authorization and all hand-carried packages shall be searched for devices such as firearms, explosives, and incendiary devices, or other items which could be used for industrial sabotage. The search shall be conducted either by a physical search or by the use of equipment capable of detecting such devices. Employees who possess an NRC or United States Department of Energy access authorization shall be

searched at random intervals. Subsequent to search, drivers of delivery and service vehicles shall be escorted at all times while within the protected area.

(2) All packages being delivered into the protected area shall be checked for proper identification and authorization. Packages other than hand-carried packages shall be searched at random intervals.

(3) A picture badge identification system shall be used for all individuals who are authorized access to protected areas without escort.

(4) Access to vital areas and material access areas shall be limited to individuals who are authorized access to vital equipment or special nuclear material and who require such access to perform their duties. Authorization for such individuals shall be provided by the issuance of specially coded numbered badges indicating vital areas and material access areas to which access is authorized. Unoccupied vital areas and material access areas shall be protected by an active intrusion alarm system.

(5) Individuals not employed by the licensee shall be escorted by a watchman, or other individual designated by the licensee, while in a protected area and shall be badged to indicate that an escort is required. In addition, each individual not employed by the licensee shall be required to register his name, date, time, purpose of visit, employment affiliation, citizenship, name and badge number of the escort, and name of the individual to be visited. Except for a driver of a delivery or service vehicle, an individual not employed by the licensee who requires frequent and extended access to a protected area or a vital area need not be escorted provided such individual is provided with a picture badge, which he must receive upon entrance into the protected area and which he must return each time he leaves the protected area, which indicates (i) nonemployee-no escort required, (ii) areas to which access is authorized, and (iii) the period for which access has been authorized.

(6) No vehicles used primarily for the conveyance of individuals shall be permitted within a protected area except under emergency conditions.

(7) Keys, locks, combinations, and related equipment shall be controlled to minimize the possibility of compromise and promptly changed whenever there is evidence that they have been compromised. Upon termination of employment of any employee, keys, locks, combinations, and related equipment to which that employee had access shall be changed.

(d) *Detection aids.* (1) All alarms required pursuant to this part shall annunciate in a continuously manned central alarm station located within the protected area and in at least one other continuously manned station, not necessarily within the protected area, such that a single act cannot remove the capability of calling for assistance or otherwise responding to an alarm. All alarms shall be self-checking and tamper indicating. The annunciation of an alarm at the onsite central alarm station shall indicate the type of alarm (e.g., intrusion alarm, emergency exit alarm, etc.) and location. All intrusion alarms, emergency exit alarms, alarm systems, and line supervisory systems shall at minimum meet the performance and reliability levels indicated by GSA Interim Federal Specification W-A-00450 B (GSA-FBS).

(2) All emergency exits in each protected area and each vital area shall be alarmed.

(e) *Communication requirements.* (1) Each guard or watchman on duty shall be capable of maintaining continuous communication with an individual in a

continuously manned central alarm station within the protected area, who shall be capable of calling for assistance from other guards and watchmen and from local law enforcement authorities.

(2) The alarm stations required by paragraph (d) (1) of this section shall have conventional telephone service for communication with the law enforcement authorities as described in paragraph (e) (1) of this section.

(3) To provide the capability of continuous communication, two-way radio voice communication shall be established in addition to conventional telephone service between local law enforcement authorities and the facility and shall terminate at the facility in a continuously manned central alarm station within the protected area.

(4) All communications equipment, including offsite equipment, shall remain operable from independent power sources in the event of loss of primary power.

(f) *Testing and maintenance.* Each licensee shall test and maintain intrusion alarms, emergency alarms, communications equipment, physical barriers, and other security related devices or equipment utilized pursuant to this section as follows:

(1) All alarms, communications equipment, physical barriers, and other security related devices or equipment shall be maintained in operable and effective condition.

(2) Each intrusion alarm shall be functionally tested for operability and required performance at the beginning and end of each interval during which it is used for security, but not less frequently than once every seven (7) days.

(3) Communications equipment shall be tested for operability and performance not less frequently than once at the beginning of each security personnel work shift.

(g) *Response requirements.* (1) The licensee shall have a safeguards contingency plan for dealing with threats, thefts, and industrial sabotage related to the special nuclear material and nuclear facilities subject to the provisions of this section. Safeguards contingency plans shall be in accordance with the criteria in Appendix C of this part, "Licensee Safeguards Contingency Plans."

(2) The licensee shall establish and document liaison with law enforcement authorities.

## PART 73 • PHYSICAL PROTECTION OF PLANTS AND MATERIALS

(c) Upon detection of abnormal presence or activity of persons or vehicles within an isolation zone, a protected area, a material access area, or a vital area; or upon evidence or indication of intrusion into a protected area, material access area, or vital area, the licensee security organization shall:

(i) Determine whether or not a threat exists,

(ii) Assess the extent of the threat, if any,

(iii) Take immediate concurrent measures to neutralize the threat by:

(A) Requiring responding guards to interpose themselves between material access areas and vital areas and any adversary attempting entry for the purpose of theft of special nuclear material or industrial sabotage and to intercept any person exiting with special nuclear material, and,

(B) Informing local law enforcement agencies of the threat and requesting assistance.

(4)† The licensee shall instruct every guard to prevent or impede attempted acts of theft or industrial sabotage by using force sufficient to counter the force directed at him including deadly force when the guard has a reasonable belief it is necessary in self-defense or in the defense of others.

(h) By (120 days after the rule becomes effective) each licensee shall submit a training and qualifications plan outlining the processes by which guards, watchmen, armed response persons and other members of the security organization will be selected, trained, equipped, tested, and qualified to assure these individuals meet the requirements of paragraph (a)(4) of this section. The training and qualifications plan shall include a schedule to show how all security personnel will be qualified by (within 2 years after the rule becomes effective) or within two years after the submitted plan is approved, whichever is later. The training and qualifications plan shall be followed by the licensee after (180 days after the rule becomes effective) or 60 days after the submitted plan is approved by the NRC, whichever is later.

### § 73.55 Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage.

Each licensee who is authorized on February 24, 1977, to operate a nuclear power reactor pursuant to Part 50 of this Chapter shall comply with the requirements of paragraphs (b), (d), (f), (g), and (h) of this section, except for any requirement involving construction and installation of equipment not already in place expressed in paragraphs (d)(1), (d)(7), (d)(8), (f)(3) and (h)(4), by May 25, 1977. The licensee shall submit by May 25, 1977, an amended physical security plan describing how the licensee will comply with all of the requirements of this

section including schedules of implementation. The licensee shall implement his plan and comply with all of the provisions of this section as soon as practicable after NRR approval of his plan but no later than February 23, 1979. Each applicant for a license to operate a nuclear power reactor pursuant to Part 50 of this chapter whose application was submitted prior to February 24, 1977 shall submit by May 25, 1977, an amended physical security plan describing how the applicant plans to comply with the requirements of this section including schedules of implementation. If such applicant receives an operating license after February 24, 1977 he shall comply with the requirements of paragraphs (b), (d), (f), (g), and (h) of this section, except for construction and installation not already in place pursuant to paragraphs (d)(1),

(d)(7), (d)(8), (f)(3) and (h)(4) of this section by May 25, 1977, or on the date of receipt of the operating license, whichever is later, and implement his plan and comply with all of the requirements of this section by February 23, 1979 or on the date of receipt of the operating license whichever is later.

Each applicant for a license to operate a nuclear power reactor pursuant to Part 50 of this Chapter whose application is submitted after February 24, 1977, shall include in the physical security plan required by § 50.34(c) the information identified in paragraphs (a) through (h) of this section and if such applicant receives an operating license, shall comply with the provisions of this section on receipt of the operating license. Except for individuals for whom the licensee has a well-grounded suspicion that such individuals are carrying firearms, explosives, or incendiary devices, a licensee need not implement the physical search requirement of paragraph (d)(1) of this section for individuals who are regular employees of the licensee at the site at which the licensee is authorized to operate a nuclear power reactor pursuant to Part 50 of this Chapter until December 1, 1980, unless the Commission directs otherwise prior to that date. Until that date, the Commission has determined that the search requirement of paragraph (d)(1) of this section, implemented using only equipment capable of detecting firearms, explosives and incendiary devices, satisfies the performance requirements of this section as they apply to searches of regular employees of the licensee at the site entering the protected area of the nuclear power reactor.

### (a) General Performance Objective and Requirements

The licensee shall establish and maintain an onsite physical protection system and security organization which will have as its objective to provide high assurance that activities involving special nuclear material are not inimical to the common defense and security, and do not constitute an unreasonable risk to the public health and safety. The physical protection system shall be designed to protect against the design basis threat of radiological sabotage as stated in § 73.1(a). To achieve this general performance objective, the onsite physical protection system and security organization shall include, but not necessarily be limited to, the capabilities to meet the specific requirements contained in paragraphs (b) through (h) of this section. The Commission may authorize an applicant or licensee to provide measures for protection against radiological sabotage other than those required by this section if the applicant or licensee demonstrates that the measures have the same high assurance objective as specified in this paragraph and that the overall level of system performance provides protection against radiological sabotage equivalent to that which would be provided by paragraphs (b)–(h) of this section and meets the general performance requirements of this section.

Specifically, in the special cases of licensed operating reactors with adjacent reactor powerplants under construction, the licensee shall provide and maintain a level of physical protection of the operating reactor against radiological sabotage equivalent to the requirements of this section.

### (b) Physical Security Organization.

(1) The licensee shall establish a security organization, including guards, to protect his facility against radiological sabotage. If a contract guard force is utilized for site security, the licensee's written agreement with the contractor will clearly show that (i) the licensee is responsible to the Commission for maintaining safeguards in accordance with Commission regulations and the licensee's security plan, (ii) the NRC may inspect, copy, and take away copies of all reports and documents required to be kept by Commission regulations, orders, or applicable license conditions whether such reports and documents are kept by the licensee or the contractor, (iii) the requirement in § 73.55(b)(4) of this section that the licensee demonstrate the ability of physical security personnel to perform their assigned duties and



## PART 73 • PHYSICAL PROTECTION OF PLANTS AND MATERIALS

responsibilities, includes demonstration of the ability of the contractor's physical security personnel to perform their assigned duties and responsibilities in carrying out the provisions of the Security Plan and these regulations, and (iv) the contractor will not assign any personnel to the site who have not first been made aware of these responsibilities.

(2) At least one full time member of the security organization who has the authority to direct the physical protection activities of the security organization shall be onsite at all times.

(3) The licensee shall have a management system to provide for the development, revision, implementation, and enforcement of security procedures. The system shall include:

(i) Written security procedures which document the structure of the security organization and which detail the duties of guards, watchmen and other individuals responsible for security; and

(ii) Provision for written approval of such procedures and any revisions thereto by the individual with overall responsibility for the security functions.

(4) The licensee shall not permit an individual to act as a guard, watchman or armed response person, or other member of the security organization unless such individual has been trained, equipped, and qualified to perform each assigned security job duty in accordance with Appendix B, of this part "General Criteria for Security Personnel." Upon the request of an authorized representative of the Commission the licensee shall demonstrate the ability of the physical security personnel to carry out their assigned duties and responsibilities. Each guard, watchman, armed response person, and other member of the security organization shall requalify in accordance with Appendix B of this part at least every 12 months. Such requalification shall be documented. By (300 days after the rule becomes effective) each licensee shall submit a training and qualifications plan outlining the processes by which guards, watchmen, armed response persons, and other members of the security organization will be selected, trained, equipped, tested, and qualified to assure that these individuals meet the requirements of this paragraph. The training and qualifications plan shall include a schedule to show how all security personnel will be qualified by (within two years after the rule becomes effective) or within two years after the submitted plan is approved, whichever is later. The training and qualifications plan shall be followed by the licensee after (500 days after the rule becomes effective) or 60 days after the submitted plan is approved by the NRC, whichever is later.

(c) *Physical barriers.* (1) The licensee shall locate vital equipment only within a vital area, which in turn, shall be located within a protected area such that access to vital equipment requires passage through at least two physical barriers of sufficient strength to meet the performance requirements of paragraph (a) of this section. More than one vital area may be located within a single protected area.

(2) The physical barriers at the perimeter of the protected area shall be separated from any other barrier designated as a physical barrier for a vital area within the protected area.

(3) Isolation zones shall be maintained in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and shall be of sufficient size to permit observation of the activities of people on either side of that barrier in the event of its penetration. If parking facilities are provided for employees or visitors, they shall be located outside the isolation zone and exterior to the protected area barrier.

(4) Detection of penetration or attempted penetration of the protected area or the isolation zone adjacent to the protected area barrier shall assure that adequate response by the security organization can be initiated. All exterior areas within the protected area shall be periodically checked to detect the presence of unauthorized persons, vehicles, or materials.

(5) Isolation zones and all exterior areas within the protected area shall be provided with illumination sufficient for the monitoring and observation requirements of paragraphs (c) (3), (c) (4), and (h) (4) of this section, but not less than 0.2 footcandle measured horizontally at ground level.

(6) The walls, doors, ceiling, floor, and any windows in the walls and in the doors of the reactor control room shall be bullet-resisting.



## PART 150 • EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY...

### § 150.32 Funds for reclamation or maintenance of byproduct material.

(a) The total amount of funds an Agreement State collects, pursuant to a license for byproduct material as defined in § 150.3(c)(2) of this Part or for any activity that results in the production of such material, for reclamation or long term maintenance and monitoring of such material, shall after November 8, 1981, be transferred to the United States if title and custody of such material and its disposal site is transferred to the United States upon termination of such license. Such funds include, but are not limited to, sums collected for long term surveillance (i.e., continued site observation, monitoring and, where necessary, maintenance). Such funds do not however, include monies held as surety where no default has occurred and the reclamation or other bonded activity has been performed.

(b) If an Agreement State requires such payments for reclamation or long term surveillance (i.e., continued site observation, monitoring and, where necessary, maintenance), the payments must, after November 8, 1981, be sufficient to ensure compliance with those standards established by the Commission pertaining to bonds, sureties, and financial arrangements to ensure adequate reclamation and long term management of such byproduct material and its disposal site.





UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS - ENERGY

**PART  
150**

**EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY  
IN AGREEMENT STATES UNDER SECTION 274**

**PROPOSED RULE MAKING**

39 FR 32922  
Published 9/12/74  
Comment Period 11/11/74

**TRANSURANIC WASTE DISPOSAL**  
Exemptions and Continued Regulatory Authority

Section 150.15 of 10 CFR Part 150 states that persons in Agreement States are not exempt from the Commission's licensing and regulatory requirements with respect to, *inter alia*, the disposal of such byproduct, source, or special nuclear material as the Commission determines by regulation or order should, because of the hazards or potential hazards thereof, not be disposed of without a license from the Commission.

The Commission is publishing proposed amendments of 10 CFR Part 20 that would provide that disposal of transuranium elements (atomic number greater than 92) by burial in soil by licensees will not be authorized. This waste would be solidified (if liquid) packaged and transferred to the AEC as soon as practicable but within five years after its generation. The AEC would be responsible for subsequent storage, treatment and disposal of such waste. The AEC would take title to the waste upon delivery and would levy a fee on the generator of the waste to cover all costs for subsequent management.

Consistent with the policy expressed in the proposed amendments, the Commission is considering a determination that waste containing or contaminated with transuranium elements should not, because of the potential hazards thereof, be disposed of by persons in an Agreement State. The effect of this determination would be to reassert the Commission's authority in Agreement States over the disposal of transuranium elements by burial in soil. The proposed amendment to § 150.15 of Part 150 which follows would reflect the proposed determination.

Transuranic wastes generally consist of, but are not restricted to, (a) expendable material such as absorbent tissues

clothing, gloves, plastic bags, and equipment; (b) solids such as ion exchange resins or filters from effluent treatment systems; (c) solidified liquid wastes, such as condensate and waste streams from process operations; (d) fuel hulls which remain after fuel reprocessing operations; and (e) liquid or solid wastes which contain or are contaminated with transuranium elements, resulting from reprocessing operations, that are not classified as high level waste. For example, all wastes originating in restricted areas of plutonium processing and fuel fabrication facilities fuel reprocessing facilities (except high level wastes) and laboratories using transuranium elements not in sealed sources should be considered transuranic waste and handled as such.<sup>1</sup> Radwaste from nuclear reactors would not generally be considered transuranic waste under normal operating conditions.<sup>1</sup>

The quantities of transuranium elements (mostly plutonium) thus far buried in licensed commercial grounds are estimated to be about 80 kilograms dispersed through a large volume (about 7.5 million cubic feet) of material.

In the evaluation of proposed licensed burial sites for radioactive wastes, two primary aspects are considered: (a) The geological, hydrological, and climatological characteristics of a site must be such that waste, once placed in the ground, will not migrate so as to have a significant impact on man or the en-

vironment; and (b) the burial grounds must be on land owned by the Federal or a state government to assure long-term control. Chemical and physical characteristics of plutonium are such that migration in soil or groundwater is unlikely. Deep well water samples taken at the perimeter of the burial sites have not shown any detectable plutonium (the principal transuranium element), thus indicating that the buried plutonium has remained immobile. On the basis of the foregoing, the Commission has concluded that the plutonium already buried does not constitute a potential hazard to man or the biosphere and thus should not be required to be removed from burial. Continued surveillance of the burial sites will be maintained to assure that a potential hazard does not develop.

Because of an anticipated increase in the quantities of wastes containing or contaminated with transuranium elements, the long half-life of transuranium elements, and their high specific radiotoxicity, the Commission believes that in the future, storage and disposal of such waste at Government-owned facilities should replace disposal in licensed commercial burial grounds. Such storage and disposal would provide a greater assurance against escape of the material to the biosphere, than would near-surface burial in commercial burial grounds. The Commission is also considering whether radionuclides other than those covered by this proposed regulation, because of potential hazards, should also be earmarked for management by the AEC, and it may propose further rule making actions in this regard.

The Commission will accept AEC and Agreement State licensee generated transuranic waste at designated Commission sites. Waste form specifications, packaging requirements, and charges will be published as a Miscellaneous Notice Concerning Commission Prices, Services, and Agreements. The Commission will continue to require, through the safety and safeguards reviews of licensed operations, that actions must be taken by its licensees to minimize to the extent possible the generation of transuranic wastes and would expect Agreement States to adopt similar requirements.

<sup>1</sup> Measurements made to determine the presence or absence of transuranium elements should be sufficiently sensitive to detect contamination levels as low as 10 nanocuries of transuranic elements per gram of waste. Waste that is suspect, but which has been measured and is not contaminated with more than 10 nanocuries per gram should be consigned to a licensed burial ground. A sensitivity of 10 nanocuries per gram for measurement has been chosen as a guide since it represents the upper range of concentration of radium in the earth's crust. In terms of long half life and radiotoxicity, transuranium elements are comparable to radium. It appears reasonable, therefore, to permit the burial of waste which might contain transuranic elements in such concentrations, or below, in licensed burial sites.

## PART 150 • PROPOSED RULE MAKING

Accordingly, concurrent with adoption in final form of the proposed amendments of 10 CFR Part 20, the following amendment to 10 CFR Part 150 would be made.

Pursuant to the Atomic Energy Act of 1954, as amended, and section 553 of Title 5 of the United States Code, notice is hereby given that adoption of the following amendment of 10 CFR Part 150 is contemplated. All interested persons who desire to submit written comments or suggestions for consideration in connection with the proposed amendment should send them to the Secretary of the Commission, U.S. Atomic Energy Commission, Washington, D.C. 20545, Attention: Dockets and Service Section, by November 11, 1974. Copies of comments on the proposed amendments may be examined at the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C.

Paragraph 150.15 (a) is amended to add a new subparagraph (7) to read as follows:

### § 150.15 Persons not exempt.

(a) \* \* \*

(7) The disposal of transuranium elements (atomic number greater than 92) by burial.

15FR15184

Published 3/10/80

Comment period expires 5/9/80

*Protection of Employees  
Who Provide Information*

See Part 19  
Proposed Rule Making

### ➤ 45 FR 70874

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*Exemption of Technetium-99 and  
Low-Enriched Uranium as Residual  
Contamination in Smelted Alloys*

See Part 30 Statements of Consideration

### ➤ 45 FR 71807

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*NRC's Jurisdiction Over Persons  
Using Byproduct, Source and Special  
Nuclear Material in Offshore Waters  
Beyond Agreement States' Territorial  
Waters*

See Part 31 Proposed Rule Making

## REGULATORY GUIDES

| Number | Title                                                                                                                                                           | Date  | Revision |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|
| 1.68.2 | Initial Startup Test Program to Demonstrate Remote Shutdown Capability for Water-Cooled Nuclear Power Plants                                                    | 7/78  | 1        |
| 1.69   | Concrete Radiation Shields for Nuclear Power Plants                                                                                                             | 12/73 |          |
| 1.7    | Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants                                                                                 | 11/78 | 3        |
| 1.71   | Welder Qualification for Areas of Limited Accessibility                                                                                                         | 12/73 |          |
| 1.72   | Spray Pond Piping Made From Fiberglass-Reinforced Thermosetting Resin                                                                                           | 11/78 | 2        |
| 1.73   | Qualification Tests of Electric Valve Operators Installed Inside the Containment of Nuclear Power Plants                                                        | 1/74  |          |
| 1.74   | Quality Assurance Terms and Definitions                                                                                                                         | 2/74  |          |
| 1.75   | Physical Independence of Electric Systems                                                                                                                       | 9/78  | 2        |
| 1.76   | Design Basis Tornado for Nuclear Power Plants                                                                                                                   | 4/74  |          |
| 1.77   | Assumptions Used for Evaluating a Control Rod Ejection Accident for Pressurized Water Reactors                                                                  | 5/74  |          |
| 1.78   | Assumptions for Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release                                | 6/74  |          |
| 1.79   | Preoperational Testing of Emergency Core Cooling Systems for Pressurized Water Reactors                                                                         | 9/75  | 1        |
| 1.80   | Preoperational Testing of Instrument Air Systems                                                                                                                | 6/74  |          |
| 1.81   | Shared Emergency and Shutdown Electric Systems for Multi-Unit Nuclear Power Plants                                                                              | 1/75  | 1        |
| 1.82   | Sumps for Emergency Core Cooling and Containment Spray Systems                                                                                                  | 6/74  |          |
| 1.83   | Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes                                                                                         | 7/75  | 1        |
| 1.84   | Design and Fabrication Code Case Acceptability—ASME Section III Division 1                                                                                      | 5/80  | 16       |
| 1.85   | Materials Code Case Acceptability—ASME Section III Division 1                                                                                                   | 5/80  | 16       |
| 1.86   | Termination of Operating Licenses for Nuclear Reactors                                                                                                          | 6/74  |          |
| 1.87   | Guidance for Construction of Class 1 Components in Elevated-Temperature Reactors (Supplement to ASME Section III Code Classes 1592, 1593, 1594, 1595, and 1596) | 6/75  | 1        |

## REGULATORY GUIDES

| Number  | Title                                                                                                                                                                      | Date                 | Revision |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------|
| 1.88    | Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records                                                                                      | 10/76                | 2        |
| 1.89    | Qualification of Class IÉ Equipment for Nuclear Power Plants                                                                                                               | 11/74                |          |
| 1.90    | Inservice Inspection of Prestressed Concrete Containment Structures With Grouted Tendons                                                                                   | 8/77                 | 1        |
| 1.91    | Evaluations of Explosions Postulated to Occur on Transportation Routes Near Nuclear Power Plants                                                                           | 2/78                 | 1        |
| 1.92    | Combining Modal Responses and Spatial Components in Seismic Response Analysis                                                                                              | 2/76                 | 1        |
| 1.93    | Availability of Electric Power Sources                                                                                                                                     | 12/74                |          |
| 1.94    | Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants | 4/76                 | 1        |
| 1.95    | Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release                                                                            | 2/77                 | 1        |
| 1.96    | Design of Main Steam Isolation Valve Leakage Control Systems for Boiling Water Reactor Nuclear Power Plants                                                                | 6/76                 | 1        |
| 1.97    | Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident                                                    | 8/77                 | 1        |
| 1.98    | Assumptions Used for Evaluating the Potential Radiological Consequences of a Radioactive Offgas System Failure in a Boiling Water Reactor                                  | 3/76                 |          |
| 1.99    | Effects of Residual Elements on Predicted Radiation Damage to Reactor Vessel Materials                                                                                     | 4/77                 | 1        |
| 1.100   | Seismic Qualification of Electric Equipment for Nuclear Power Plants                                                                                                       | 8/77                 | 1        |
| ➤ 1.101 | Emergency Planning for Nuclear Power Plants                                                                                                                                | (withdrawn 10/21/80) |          |
| 1.102   | Flood Protection for Nuclear Power Plants                                                                                                                                  | 9/76                 | 1        |
| 1.103   | Post-Tensioned Prestressing Systems for Concrete Reactor Vessels and Containments                                                                                          | 10/76                | 1        |
| 1.104   | Overhead Crane Handling Systems for Nuclear Power Plants                                                                                                                   | ( withdrawn 8/22/79) |          |
| 1.105   | Instrument Setpoints                                                                                                                                                       | 11/76                | 1        |
| 1.106   | Thermal Overload Protection for Electric Motors on Motor-Operated Valves                                                                                                   | 3/77                 | 1        |



**REGULATORY GUIDES**  
**DIVISION 3 REGULATORY GUIDES**  
**FUELS AND MATERIALS FACILITIES**

| Number | Title                                                                                                                                 | Date  | Revision |
|--------|---------------------------------------------------------------------------------------------------------------------------------------|-------|----------|
| 3.1    | Use of Borosilicate-Class Rashig Rings as a Neutron Absorber in Solutions of Fissile Material                                         | 1/73  |          |
| 3.2    | Efficiency Testing of Air-Cleaning Systems Containing Devices for Removal of Particles                                                | 1/73  |          |
| 3.3    | Quality Assurance Program Requirements for Fuel Reprocessing Plants and for Plutonium Processing and Fuel Fabrication Plants          | 3/74  | 1        |
| 3.4    | Nuclear Criticality in Safety Operations with Fissionable Materials Outside Reactors                                                  | 8/77  | 1        |
| 3.5    | Standard Format and Content of License Applications for Uranium Mills                                                                 | 11/77 | 1        |
| 3.6    | Guide to Content of Technical Specifications for Fuel Reprocessing Plants                                                             | 4/73  |          |
| 3.7    | Monitoring of Combustible Gases and Vapors in Plutonium Processing and Fuel Fabrication Plants                                        | 3/73  |          |
| 3.8    | Preparation of Environmental Reports for Uranium Mills<br>(Comments requested by 11/24/78)                                            | 9/78  | 1        |
| 3.9    | Concrete Radiation Shields                                                                                                            | 6/73  |          |
| 3.10   | Liquid Waste Treatment System Design Guide for Plutonium Processing and Fuel Fabrication Plants                                       | 6/73  |          |
| 3.11   | Design, Construction, and Inspection of Embankment Retention Systems for Uranium Mills                                                | 12/77 | 2        |
| 3.11.1 | Operational Inspection and Surveillance of Embankment Retention Systems for Uranium Mill Tailings (comments requested by 6/22/79)     | 4/79  |          |
| 3.12   | General Design Guide for Ventilation Systems of Plutonium Processing and Fuel Fabrication Plants                                      | 8/73  |          |
| 3.13   | Guide for Acceptable Waste Storage Methods at UF <sub>6</sub> Production Plants                                                       | 11/73 |          |
| 3.14   | Seismic Design Classification for Plutonium Processing and Fuel Fabrication Plants                                                    | 10/73 |          |
| 3.15   | Standard Format and Content of License Applications for Storage Only of Unirradiated Reactor Fuel and Associated Radioactive Material | 10/73 |          |
| 3.16   | General Fire Protection Guide for Plutonium Processing and Fuel Fabrication Plants                                                    | 1/74  |          |
| 3.17   | Earthquake Instrumentation for Fuel Reprocessing Plants                                                                               | 2/74  |          |
| 3.18   | Confinement Barriers and Systems for Fuel Reprocessing Plants                                                                         | 2/74  |          |
| 3.19   | Reporting of Operating Information for Fuel Reprocessing Plants                                                                       | 2/74  |          |

## REGULATORY GUIDES

| Number | Title                                                                                                                                                                    | Date                 | Revision |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------|
| 3.20   | Process Offgas Systems for Fuel Reprocessing Plants                                                                                                                      | 2/74                 |          |
| 3.21   | Quality Assurance Requirements for Protective Coatings Applied to Fuel Reprocessing Plants and to Plutonium Processing and Fuel Fabrication Plants                       | 3/74                 |          |
| 3.22   | Periodic Testing of Fuel Reprocessing Plant Protection System Actuation Functions                                                                                        | 6/74                 |          |
| ➤ 3.23 | Stabilization of Uranium-Thorium Milling Waste Retention Systems                                                                                                         | (withdrawn 10/22/80) |          |
| 3.24   | Guidance on the License Application, Siting, Design, and Plant Protection for an Independent Spent Fuel Storage Installation                                             | 12/74                |          |
| 3.25   | Standard Format and Content of Safety Analysis Reports for Uranium Enrichment Facilities                                                                                 | 12/74                |          |
| 3.26   | Standard Format and Content of Safety Analysis Reports for Fuel Reprocessing Plants                                                                                      | 2/75                 |          |
| 3.27   | Nondestructive Examination of Welds in the Liners of Concrete Barriers in Fuel Reprocessing Plants                                                                       | 6/77                 | 1        |
| 3.28   | Welder Qualification for Welding in Areas of Limited Accessibility in Fuel Reprocessing Plants and in Plutonium Processing and Fuel Fabrication Plants                   | 5/75                 |          |
| 3.29   | Preheat and Interpass Temperature Control for the Welding of Low-Alloy Steel for Use in Fuel Reprocessing Plants and in Plutonium Processing and Fuel Fabrication Plants | 5/75                 |          |
| 3.30   | Selection, Application, and Inspection of Protective Coatings (Paints) for Fuel Reprocessing Plants                                                                      | 6/75                 |          |
| 3.31   | Emergency Water Supply Systems for Fuel Reprocessing Plants                                                                                                              | 9/75                 |          |
| 3.32   | General Design Guide for Ventilation Systems for Fuel Reprocessing Plants                                                                                                | 9/75                 |          |
| 3.33   | Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Fuel Reprocessing Plant                                   | 4/77                 |          |
| 3.34   | Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Uranium Fuel Fabrication Plant                            | 8/16                 | 1        |
| 3.35   | Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Plutonium Processing and Fuel Fabrication Plant           | 8/16                 | 1        |
| † 3.36 | Nondestructive Examination of Tubular Products for Use in Fuel Reprocessing Plants and in Plutonium Processing and Fuel Fabrication Plants                               | (withdrawn 2/1/79)   |          |

† Available at the NRC Public Document Room, 1717 H Street, N.W., Washington, D.C.

## REGULATORY GUIDES

### DIVISION 10 REGULATORY GUIDES GENERAL GUIDES

| Number | Title                                                                                                                         | Date  | Revision |
|--------|-------------------------------------------------------------------------------------------------------------------------------|-------|----------|
| 10.1   | Compilation of Reporting Requirements for Persons Subject to NRC Regulations                                                  | 6/77  | 3        |
| 10.2   | Guidance to Academic Insitutions Apply for Specific Byproduct Material Licenses of Limited Scope                              | 1/77  | 1        |
| 10.3   | Guide for the Preparation of Applications for Special Nuclear Material Licenses of Less Than Critical Mass Quantities         | 4/77  | 1        |
| 10.4   | Guide for the Preparation of Applications for Licenses to Process Source Material                                             | 3/77  | 1        |
| 10.5   | Guide for the Preparation of Applications for Type A Licenses of Broad Scope for Byproduct Material                           | 9/76  |          |
| 10.6   | Guide for the Preparation of Applications for Use of Sealed Sources and Devices for the Performance of Industrial Radiography | 9/76  |          |
| 10.7   | Guide for the Preparation of Applications for Licenses for Laboratory Use of Small Quantities of Byproduct Material           | 9/79  | 1        |
| ➤10.8  | Guide for the Preparation of Applications for Medical Programs<br><i>(comments requested by 3/23/79)</i>                      | 10/80 | 1        |
| 10.9   | Guide for the Preparation of Applications for Licenses for the Use of Gamma Irradiators.                                      | 4/15  |          |





## PROPOSED SYSTEMS OF RECORDS

Road, Bethesda, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Parts 1 and 2.

### CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

NRC employees.

### CATEGORIES OF RECORDS IN THE SYSTEM:

This system of records contains evaluations of employees, evaluation criteria and methods, supervisory appraisals of performance and career development potential, and other related records.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

- a. Section 161(d), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201(d)(1976);
- b. 5 U.S.C. 4311, et seq.

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

The records may be used for any of the routine uses specified in the Prefatory Statement.

### POLICIES AND PRACTICES FOR STORING, RETRIEVING, ACCESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:

#### STORAGE:

Maintained on paper in the folders.

#### RETRIEVABILITY:

Records are accessed by name.

#### SAFEGUARDS:

Maintained in locked file cabinets. Access to and use of these records are limited to those persons whose official duties require such access.

#### RETENTION AND DISPOSAL:

Part A: Retained 1 year, or until subsequent rating is prepared, whichever is later.

Part B: Retained for 5 years, or until the fifth annual appraisal is completed, whichever is later.

#### SYSTEM MANAGER(S) AND ADDRESS:

Part A: Chief, Personnel Operations Branch Division of Organization and Personnel Office of Administration U.S. Nuclear Regulatory Commission Washington, DC 20555

Part B: Chairman, Performance Review Board U.S. Nuclear Regulatory Commission Washington, DC 20555

#### NOTIFICATION PROCEDURE:

Director, Office of Administration U.S. Nuclear Regulatory Commission Washington, DC 20555

### RECORD ACCESS PROCEDURES:

Same as "Notification procedure" for each part.

### CONTESTING RECORD PROCEDURES:

Same as "Notification procedure" for each part.

### RECORD SOURCE CATEGORIES:

Part A: Individual to whom record pertains and employee's supervisor.

Part B: Individual to whom record pertains and employee's supervisors: any documents and sources used to develop critical elements and performance standards for that Senior Executive Service position.

45 FR 28847

Published 4/30/80

Comment period expires 5/30/80

### Privacy Act of 1974; Systems of Records, Minor Amendments

AGENCY: United States Nuclear Regulatory Commission (NRC).

ACTION: Proposed minor amendments of systems of records.

**SUMMARY:** The Nuclear Regulatory Commission is proposing minor amendments to the NRC Systems of Records, NRC-30. The amendments clarify and update the information contained in the NRC Systems of Records, in order to allow for contractor access to records on a need-to-know basis.

**COMMENT DATE:** Comments are due on or before May 30, 1980.

**ADDRESS:** Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch.

**FOR FURTHER INFORMATION CONTACT:** Sarah N. Wigginton, FOI/PA Branch, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Phone: (301) 492-8133.

**SUPPLEMENTARY INFORMATION:** In accordance with the Privacy Act of 1974, the Nuclear Regulatory Commission has published notices of those systems of records maintained by the NRC which contain personal information about individuals and from which such information can be retrieved by an individual identifier. The notices were published as a document subject to publication in the annual compilation of Privacy Act documents.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 552a of Title 5 of the United States Code, as amended, notice is hereby given that adoption of the following amendments to the NRC System of Records is contemplated. All interested persons who desire to submit written comments or suggestions for consideration in connection with the proposed amendments should send them to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch by May 30, 1980. Copies of comments on the proposed amendments may be examined at the Commission's Public Document Room at 1717 H Street, N.W., Washington, DC.

1. The paragraphs of NRC-30 entitled "Routine uses of records maintained in the system, including categories of uses and the purposes of such uses," "Storage," "Safeguards," "Retention and disposal," and "System manager(s) and address," are amended to read as follows:

#### NRC-30

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Records in the system of records are used as a project management tool in various management records throughout the NRC.

Information in these records may be disclosed for the routine uses specified in paragraph numbers 5 and 6 of the Prefatory Statement.

### POLICIES AND PRACTICES FOR STORING, RETRIEVING, ACCESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:

#### STORAGE:

Maintained in computer files, computer records, on tapes, disks, cards, and microfiche.

#### SAFEGUARDS:

Access to and use of these records are limited to those persons whose official duties require such access.

#### RETENTION AND DISPOSAL:

Retained indefinitely in computer files.

#### SYSTEM MANAGER(S) AND ADDRESS:

Director, Office of Management and Program Analysis, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

# PROPOSED SYSTEMS OF RECORDS

➤ 45 FR 70161

Published 10/22/80

Comment period expires 11/21/80

## Privacy Act of 1974; Notices of Systems of Records

### Proposed Minor Amendments

**AGENCY:** Nuclear Regulatory Commission (NRC).

**ACTION:** Proposed minor amendments of systems of records.

**SUMMARY:** The Nuclear Regulatory Commission is proposing minor amendments to the NRC Systems of Records, NRC-1, 4, 7, 8, 9, 11, 15, 16, 18, 20, 22, 27, 31, 33, 34, 36, and 38. The proposed amendments would clarify and update the information contained in the NRC Systems of records. The NRC is also proposing minor amendments to the Prefatory Statement of General Routine Uses.

**COMMENT DATE:** Comments are due on or before November 21, 1980.

**ADDRESS:** Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch.

#### FOR FURTHER INFORMATION CONTACT:

Sarah N. Wigginton, FOI/PA Branch, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Phone: (301) 492-8133.

**SUPPLEMENTARY INFORMATION:** In accordance with the Privacy Act of 1974, the Nuclear Regulatory Commission has published notices of those systems of records maintained by the NRC which contain personal information about individuals and from which such information can be retrieved by an individual identifier. The notices were published as a document subject to publication in the annual compilation of Privacy Act documents. The amendments are of a minor nature and do not include any substantive changes.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 552a of Title 5 of the United States Code, as amended, notice is hereby given that adoption of the following amendments to the NRC Systems of Records is contemplated. All interested persons who desire to submit written comments should send them to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch by

November 21, 1980. Copies of comments on the proposed amendments may be examined at the Commission's Public Document Room 1717 H Street NW., Washington, D.C.

1. Paragraphs one through four of the Prefatory Statement of General Routine Uses are amended to read as follows:

#### Prefatory Statement of General Routine Uses

The following routine uses apply to each system of records notice set forth below which specifically references this Prefatory Statement.

1. In the event that a system of records maintained by the NRC to carry out its functions indicates a violation of law, whether civil, criminal or regulatory in nature, and whether arising by general statute or particular program statute, or by regulation, rules or order issued pursuant thereto, the relevant records in the system of records may be referred, as a routine use, to the appropriate agency, whether Federal, State, local or foreign, charged with the responsibility of investigating or prosecuting such violation or charged with enforcing or implementing the statute, or rule, regulation or order issued pursuant thereto.

2. A record from this system or records may be disclosed, as a routine use, to a Federal, State, local or foreign agency if necessary to obtain information relevant to an NRC decision concerning the hiring or retention of an employee, the issuance of a security clearance, the letting of a contract, or the issuance of a license, grant or other benefit.

3. A record from this system of records may be disclosed, as a routine use, to a Federal, State, local or foreign agency in response to its request, in connection with the hiring or retention of an employee, the issuance of a security clearance, the reporting of an investigation of an employee, the letting of a contract, or the issuance of a license, grant, or other benefit by the requesting agency, to the extent that the information is relevant and necessary to the requesting agency's decision on the matter.

4. A record from this system of records may be disclosed as a routine use, in the course of discovery and in presenting evidence to a court, magistrate, administrative tribunal, or grand jury, including disclosures to opposing counsel in the course of settlement negotiations.

2. The paragraphs of NRC-1, "Appointment and Promotion Certificate Records," entitled "Storage" and

"Retention and disposal" are amended to read as follows:

#### NRC-1

##### SYSTEM NAME:

Appointment and Promotion Certificate Records—NRC.

##### STORAGE:

Paper records are maintained in file folders in the Records Retention Center, St. Louis, Missouri. Microfiche records are kept in the Division of Organization and Personnel.

##### RETENTION AND DISPOSAL:

Retained for 2 years from date of selection, then personal records are destroyed by shredding; nonpersonal records are destroyed through regular trash disposal system.

3. The paragraphs of NRC-4, "Conflict of Interest Files," entitled "Categories of records in the system" and "Authority for maintenance of the system" are amended to read as follows:

#### NRC-4

##### SYSTEM NAME:

Conflict of Interest Files—NRC.

##### CATEGORIES OF RECORDS IN THE SYSTEM:

a. General biographical data (i.e., name, birthdate, home address, position title, home and business telephone, citizenship, educational history, employment history, professional society memberships, honors, fellowships received, publications, licenses, and special qualifications);

b. Financial status (i.e., nature of financial interests and in whose name held, creditors, character of indebtedness, interest in real property, monthly U.S. Civil Service Annuity, and status as Uniformed Services Retired Officer);

Certifications by employees that they and members of their families are in compliance with the Commission's stock ownership regulations;

d. Requests for approval of outside employment by NRC employees and NRC responses thereto;

e. Determination (i.e., no conflict or apparent conflict of interest, questions requiring resolution, steps taken toward resolution); and

f. Information pertaining to appointment (i.e., proposed period of NRC service, estimated number of days of NRC employment during period of service, proposed pay, clearance status, description of services to be performed and explanation of need for the services,

## PROPOSED SYSTEMS OF RECORDS

justification for proposed pay, description of expenses to be reimbursed and dollar limitation, and description of government-owned property to be in possession of appointee).

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

- a. 18 U.S.C. 201 (1976);
- b. Executive Order 11222, May 8, 1965;
- c. 10 CFR 0.735-29; 10 CFR 0.735-40.

4. The paragraphs of NRC-7, "Division of Document Control Workload Assignment and Production Records," entitled "System name," "System location," "Routine uses of records maintained in the system, including categories of users and the purposes of such uses," "Safeguards," and "System manager(s) and address" are amended to read as follows:

### NRC-7

#### SYSTEM NAME:

Division of Technical Information and Document Control Workload Assignment and Production Records—NRC

#### SYSTEM LOCATION:

Primary system—Division of Technical Information and Document Control, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Part 1 (a), (b), (e), (f), and (g).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used by the Division of Technical Information and Document Control for any of the routine uses specified in the Prefatory Statement.

### SAFEGUARDS:

Files relating to comparative employee production and analysis thereof are maintained in locked desks. Budgetary and staffing projection data are maintained in locked and unlocked files. All files are under immediate control of the supervisory staff.

### SYSTEM MANAGER(S) AND ADDRESS:

Director, Division of Technical Information and Document Control, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

5. The paragraph of NRC-8, "Employee Appeals, Grievances and Complaints Records," entitled "System location" is amended to read as follows:

### NRC-8

#### SYSTEM NAME:

Employee Appeals, Grievances and Complaints Records—NRC.

#### SYSTEM LOCATION:

Primary system—Division of Organization and Personnel, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at locations listed in Addendum I, Parts 1 and 2.

6. The paragraph of NRC-9, "Equal Employment Opportunity Records Files," entitled "Retention and disposal" is amended to read as follows:

### NRC-9

#### SYSTEM NAME:

Equal Employment Opportunity Records Files—NRC.

#### RETENTION AND DISPOSAL:

Retained indefinitely.

7. The paragraphs of NRC-11, "General Personnel Records (Official Personnel Folder and Related Records)," entitled "System location," "Routine uses of records maintained in the system, including categories of users and the purposes of such uses," and "Retention and disposal" are amended to read as follows:

### NRC-11

#### SYSTEM NAME:

General Personnel Records (Official Personnel Folder and Related Records)—NRC.

#### SYSTEM LOCATION:

Primary system—Division of Organization and Personnel, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Parts 1 and 2; at the Department of Energy computer facility, Germantown, Maryland; and at the National Institutes of Health computer facility, Bethesda, Maryland. The duplicate systems maintained in a particular office, division or branch may contain information of specific application to employees in that organization in addition to that information contained in the primary system.

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used:

a. By the Office of Personnel Management and Merit Systems Protection Board for making a decision when an NRC employee or former NRC employee questions the validity of a specific document in an individual's record;

b. To provide information to a prospective employer of a government employee. Upon transfer of the employee to another Federal agency, the information is transferred to such agency;

c. To update the Office of Personnel Management systems concerning the Central Personnel Data File (CPDF), the Executive Inventory File and security investigations index hires, and to update adverse actions and terminations records of the Merit Systems Protection Board;

d. To provide statistical reports to Congress, agencies, and the public on characteristics of the Federal work force;

e. To provide information to the Office of Personnel Management and Merit Systems Protection Board for review and audit purposes;

f. To provide members of the public with the names, position titles, grades, salaries, appointments (temporary or permanent), and duty stations of employees;

g. Medical records may be used for providing information to the Public Health Service in connection with Health Maintenance Examinations and to other Federal agencies responsible for Federal benefit programs administered by the Department of Labor (Office of Workmen's Compensation Programs) and the Office of Personnel Management; and

h. For any of the routine uses specified in the Prefatory Statement.

### RETENTION AND DISPOSAL:

The Official Personnel Folder is sent to the National Personnel Records Center within 30 days of the date of the employee's separation from the Federal service. Some records such as letters of reprimand, indebtedness and vouchers are maintained for two years or destroyed by shredding when an individual resigns, transfers or is separated from the Federal service. SF-1, "Service Record Card," is retained indefinitely after separation or transfer.

8. The paragraph of NRC-15, "National Standards Committee Membership Files," entitled "Categories of records in the system" is amended to read as follows:



## PROPOSED SYSTEMS OF RECORDS

### NRC-15

#### SYSTEM NAME:

National Standards Committee  
Membership Files—NRC.

#### CATEGORIES OF RECORDS IN THE SYSTEM:

This system is a comprehensive record of NRC personnel on the nuclear standards committees and contains members' names, the names of the committees to which they belong, and the names of the NRC offices in which the members work.

9. The paragraph of NRC-16, "Facility Operator Licensees Records Files," entitled "Routine uses of records maintained in the system, including categories of users and the purposes of such uses" is amended to read as follows:

### NRC-16

#### SYSTEM NAME:

Facility Operator Licensees Records  
Files—NRC.

#### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used:

a. To determine if the individual meets the requirements of 10 CFR Part 55 to take an examination or to be issued an operator's license;

b. For any of the routine uses specified in the Prefatory Statement, except paragraph number 3;

c. To provide researchers with information for statistical evaluations related to selections, training and examination of facility operators;

d. To provide for examination and testing material and obtain results from contractors; and

e. To provide facility management with sufficient information to enroll the individuals in the licensed operator requalification program.

10. The paragraphs of NRC-18, "Office of Inspector and Auditor Index File and Associated Records" entitled "Authority for maintenance of the system," "Routine uses of records maintained in the system, including categories of users and the purposes of such uses," and "Safeguards" are amended to read as follows:

### NRC-18

#### SYSTEM NAME:

Office Inspector and Auditor Index  
File and Associated Records—NRC.

#### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

a. Subsections 25(c) and 161(c) of the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2035(c) and 2201(c) (1976);

b. Subsection 201(f), Energy Reorganization Act of 1974, 42 U.S.C. 5841(f) (1976).

#### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

a. A record in the system of records may be disclosed as a routine use to a Federal, State, local, or foreign agency or to an individual or organization, if the disclosure is reasonably necessary to elicit information or to obtain the cooperation of a witness or an informant.

b. A record in the system of records relating to a case or matter falling within the purview of the Office of Inspector and Auditor that has been referred for audit, inspection or investigation may be disclosed as a routine use to the referring agency, group, organization or individual to notify such agency, group, organization or individual of the status of the case or matter or of any decisions or determination that has been made.

c. A record in the system of records relating to an individual held in custody pending arraignment, trial, or sentence, or after conviction, may be disclosed as a routine use to a Federal, State, local or foreign prison, probation, parole or pardon authority, or to any agency or individual concerned with the maintenance, transportation, or release of such an individual.

d. A record in the system of records relating to a case or matter may be disclosed as a routine use to a foreign country pursuant to an international treaty or convention entered into and ratified by the United States.

e. A record in the system of records may be disclosed as a routine use to a Federal, State, local or foreign law enforcement agency to assist in the general crime prevention and detection efforts of the recipient agency or to provide investigative leads to such agency.

f. A record in the system of records in the nature of an audit, inspection or investigation report relating to the integrity and efficiency of the Commission operation and management may be disseminated outside the Commission as part of the Commission's responsibility to inform the Congress and the public about Commission operations.

g. A record in the system of records may be disclosed for any of the routine uses specified in the Prefatory Statement.

#### SAFEGUARDS:

The index is maintained in unlocked file cabinets and the associated records are located in lockable metal filing cabinets or safes. All records are under visual control during normal working hours, available only to authorized personnel whose duties require access, and stored in a room that is locked after normal working hours.

11. The paragraph of NRC-20, "Official Travel Records," entitled "Retrievability" is amended to read as follows:

### NRC-20

#### SYSTEM NAME:

Official Travel Records—NRC.

#### RETRIEVABILITY:

Records are accessed by name, social security account number, authorization number, estimated travel start day, authorization process day, voucher process day, and voucher payment schedule number.

12. The paragraph of NRC-22, "Personnel Performance Appraisals," entitled "Retention and Disposal" is amended to read as follows:

### NRC-22

#### SYSTEM NAME:

Personnel Performance Appraisals—  
NRC.

#### RETENTION AND DISPOSAL:

Retained 1 year, or until subsequent rating is prepared, whichever is later, then destroyed by shredding.

13. The paragraphs of NRC-27, "Radiation Exposure Information and Reports System (REIRS)," entitled "Categories of individuals covered by the system" and "Categories of records in the system" are amended to read as follows:

### NRC-27

#### SYSTEM NAME:

Radiation Exposure Information and  
Reports System (REIRS)—NRC.

#### CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Individuals monitored for radiation exposure while employed by or visiting or temporarily assigned to certain NRC licensed facilities; individuals who were exposed to radiation or radioactive materials in incidents required to be reported pursuant to 10 CFR 20.403 and

## PROPOSED SYSTEMS OF RECORDS

20.405 by all NRC licensees; individuals who may have been exposed to radiation or radioactive materials off-site from a facility, plant, installation, or other place of use of licensed materials, or in unrestricted areas, as a result of an incident involving byproduct, source, or special nuclear material; as the required by NAVMED P-5055, Radiation Health Protection Manual, monitored individuals terminating their service with the Navy prior to 1977; and monitored employees of all the registrants of the State of Illinois.

### CATEGORIES OF RECORDS IN THE SYSTEM:

These records contain information relating to individual's name; sex; social security account number; date of birth; job category; period of employment; place and period date of exposure; name, address, and license number of individual's employer; licensee name and number reporting the incident; radiation doses or estimates of exposure received during this period; types of radiation; part(s) or organ(s) exposed; and nuclide(s) involved. Some reports will indicate whether the individual is a contractor or a utility employee. Between January 1972 and May 1974 the following information was also recorded for individuals over-exposed to radiation: sex, training experience, regular occupation of the exposed individuals; device or method used to determine dose(s); brief statement describing the incident and the causes; corrective actions taken; status of exposed individual (i.e., medical treatment); type, age, and manufacturer of malfunctioning equipment; and cumulative dose prior to incident.

14. The paragraphs of NRC-31, "Secretariat Records Facility Files," entitled "System name," "System location," "Categories of individuals covered by the system," "Categories of records in the system" "Authority for maintenance of the system," "Route uses of records maintained in the system including categories of users and the purposes of such uses," "Storage," "Retrievability," "Safeguards," "Retention and disposal," and "Systems exempted from certain provisions of the act" are amended to read as follows:

#### SYSTEM NAME:

Correspondence and Records Branch, Office of the Secretary, NRC.

#### SYSTEM LOCATION:

Office of the Secretary, Correspondence and Records Branch, NRC, 1717 H Street, N.W., Washington, DC 20555.

### CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

The majority of records in this system consist of internal NRC memoranda between NRC employees and the Chairman, a Commissioner, or the Secretary in the ordinary course of carrying out the official business of the NRC. Records also include correspondence from Members of Congress and their staffs including constituent referrals, and White House correspondence referred to the NRC for response. Correspondence may identify an individual's social security number, date of birth, address, and employment.

### CATEGORIES OF RECORDS IN THE SYSTEM:

These records contain information concerning all subjects which directly or indirectly relate to the fulfillment of NRC's statutory mandate. Records include information dealing with the policy, legal, administrative, and adjudicatory functions of the NRC.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

- a. Section 201, Energy Reorganization Act of 1974, 42 U.S.C. 5841 (1976);
- b. 44 U.S.C. 3101 (1970).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

The records may be used for any of the routine uses specified in the Prefatory Statement.

### STORAGE:

Records are maintained in file folders.

### RETRIEVABILITY:

Most records are accessed by subject matter headings and are not individually identifiable. Access to some correspondence by individual name is available through correspondence control documents.

### SAFEGUARDS:

Access to and use of these records are limited to those persons whose official duties require such access. Classified materials are maintained in approved safes, and unclassified records are maintained in rolling file equipment. Access to floor where records are held is controlled 24 hours per day by Federal Protective Officers.

### RETENTION AND DISPOSAL:

Retained indefinitely.

### SYSTEMS EXEMPTED FROM CERTAIN PROVISIONS OF THE ACT:

Pursuant to 5 U.S.C. 552a(k)(1), the Commission has exempted portions of the system of records from 5 U.S.C. 552a(c)(3), (d), (e)(1), (e)(4)(G), (H) and (I), and (f). The exemption rule is contained in Section 9.95 of the NRC regulations (10 CFR 9.95).

15. The paragraphs of NRC-33, "Special Inquiry File," entitled "System location" and "Storage" are amended to read as follows:

#### NRC-33

#### SYSTEM NAME:

Special Inquiry File.

#### SYSTEM LOCATION:

a. Primary system: Special Inquiry Group, U.S. Nuclear Regulatory Commission, 7920 Norfolk Avenue, Bethesda, Maryland.

b. Duplicate system: a duplicate system exists, in whole or in part, at the TERA Advanced Services Corporation, 7101 Wisconsin Avenue, Suite 1400, Bethesda, Maryland.

#### STORAGE:

Maintained in microfiche, disks, tapes, and paper in file folders. Documents are maintained in secured vault facilities.

16. The paragraph of NRC-34, "Advisory Committee on Reactor Safeguards (ACRS) Correspondence Index and Associated Records," entitled "System manager(s) and address" is amended to read as follows:

#### SYSTEM NAME:

Advisory Committee on Reactor Safeguards (ACRS) Correspondence Index and Associated Records—NRC.

#### SYSTEM MANAGER(S) AND ADDRESS:

Chief, Technical Information Branch, Advisory Committee on Reactor Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

17. The paragraphs in NRC-36, "Employee Locator Records Files," entitled "Storage," "Safeguards," and "System manager(s) and address" are amended to read as follows:

#### SYSTEM NAME:

Employee Locator Records Files—NRC.

#### STORAGE:

Maintained on index cards.

#### SAFEGUARDS:

Maintained in controlled access room under 24-hour visual control of NRC



## PROPOSED SYSTEMS OF RECORDS

operators. Access to and use of these records are limited to those persons whose official duties require such access.

\* \* \* \*

### SYSTEM MANAGER(S) AND ADDRESS:

Chief, Telecommunications Branch,  
Division of Facilities and Operations  
Support, Office of Administration, U.S.  
Nuclear Regulatory Commission,  
Washington, DC 20555.

\* \* \* \*

18. The paragraphs of NRC-38, "Mailing Lists," entitled "System location" and "System manager(s) and address" are amended to read as follows:

### NRC-38

#### SYSTEM NAME:

Mailing Lists—NRC.

#### SYSTEM LOCATION:

Primary system: Division of Technical  
Information and Document Control,  
Office of Administration, NRC, 7920  
Norfolk Avenue, Bethesda, Maryland.

\* \* \* \*

### SYSTEM MANAGER(S) AND ADDRESS:

Director, Division of Technical  
Information and Document Control,  
Office of Administration, U.S. Nuclear  
Regulatory Commission, Washington,  
DC 20555.

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On the other hand, the use of an "alternate board member" <sup>1</sup> does not arguably violate the statutory principles discussed above. The use of an alternate board member will not require a separate hearing or proceeding as would use of a special master. The alternate board member will sit with the three-member licensing board, will ask questions, comment upon testimony and provide his advice on the record and in the presence of the parties to the licensing board. The licensing board will still preside at the reception of the evidence, will still rule on issues of credibility and admissibility and will decide all issues in the case. The recommended decision of the alternate board member will be made on-the-record with an opportunity for the parties to comment thereon. The licensing Board Panel's practice of avoiding off-the-record communications between the Board and other Panel members on any fact in issue will apply to communications between the Board and the alternate after the alternate's report has been received. Thus no party will lose any statutory rights and each party will be given an opportunity to provide views and comments on the alternate member's reports to the Licensing Board. In addition, that party aggrieved by any decision of the Board, based in part on an alternate member's decision, will have an opportunity to appeal that decision to the Atomic Safety and Licensing Appeal Board. Thus the Commission believes that no changes are necessary to the proposed rule on use of alternate board members as clarified above.

The Commission adopts final rules on the use of part-time ASLBP members as follows:

Section 2.722(a)(1) provides for technical interrogators who may assist the presiding officer during the hearing by examining witnesses. The interrogator will play no part in the decision and will provide no advice to the Board. No changes are necessary to the proposed rules. See 45 FR 5308.

Section 2.722(a)(2) authorizes special masters to hear evidentiary presentations by the parties on specific technical matters and, upon completion of the presentation of evidence, to prepare a report that would become part of the record. Such use shall be upon

consent of all the parties. The parties will have an opportunity to comment upon the report and may appeal evidentiary rulings to the presiding officer. The presiding officer will retain final decisionmaking authority over the issues heard and reported on by the special master. The proposed rule is modified to provide for consent of the parties.

Section 2.722(a)(3) authorizes an alternate board member to participate in that portion of the proceeding relating to his or her area of expertise and to report conclusions to the presiding officer. The alternate board member, as clarified above, shall ask questions, provide advice and provide a written record of his advice to the Board. However, the three-member Board shall preside at all sessions and rule on all questions of evidence and other motions directed during that portion of the proceeding. The Board shall also retain all decisionmaking authority. With the explanation provided in this supplementary information, no changes are necessary.

Section 2.722(b) authorizes consultants to brief the Board as described in the proposed rule. In addition, modifications to existing Sections 2.718 and 2.719 shall be made as described in the proposed rule. No changes are necessary to either of these proposals. 45 FR 5308. A minor change to the proposed addition to Part 2, Appendix A has been made to avoid confusion in the use of the term "alternate board member" with the term "alternate" in 10 CFR 2.721(b).

Because the final rules are not substantive and relate only to matters of Board procedure and do not require any change in conduct on the part of any party, the rules are effective immediately when published in the Federal Register 5 U.S.C. 553(d). Licensing Boards, however, engaged in licensing hearings when the rule becomes effective should solicit the views of the parties before first using a special assistant.

45 FR 68919

Published 10/17/80

Effective 10/17/80

### 10 CFR Part 2

#### Changes in Rules of Practice Governing Summary Disposition on Pleadings

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is amending its regulations governing the authority of its presiding officers to consider motions for summary disposition of certain issues on the pleadings, 10 CFR Section 2.749, to permit parties to file answers supporting such motions.

**EFFECTIVE DATE:** October 17, 1980.

**FOR FURTHER INFORMATION CONTACT:** Bruce A. Berson, Office of the Executive Legal Director, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Telephone (301) 492-7878.

**SUPPLEMENTARY INFORMATION:** Section 2.749 of the Commission's Rules of Practice for Domestic Licensing Proceedings, "Authority of presiding officer to dispose of certain issues on the pleadings," establishes a procedure whereby a party to an administrative proceeding may move the presiding officer to rule in that party's favor as to all or any part of the matters involved in the proceeding. The presiding officer will render the decision sought by the moving party if the filings in the proceeding show that there is no genuine issues as to any material fact and that the moving party is entitled to a decision as a matter of law.<sup>1</sup>

Section 2.749(a) now provides that "any other party may serve an answer opposing the motion [for summary disposition], with or without supporting affidavits, within twenty (20) days after service of the motion" (emphasis added). However, it has been a long-standing practice of the regulatory staff to file an answer to the motions of other parties for summary disposition—in support or in opposition, as appropriate.

The Commission has determined that the rule should be clarified to specifically permit responses in support of, as well as in opposition to, motions for summary disposition. Since important legal and procedural consequences flow from a presiding officer's grant or denial of a motion for summary disposition, the Commission believes that the views of its regulatory staff, as well as the views of other parties, should be considered and may be of substantial assistance to the presiding officer. Therefore, the Commission is clarifying § 2.749(a) to specifically permit responses from parties which support motions for summary disposition. The clarification will help ensure that the relevant issues are fully developed before the presiding officer rules on the motion and is

<sup>1</sup>The procedure established in the rule may be used only for the determination of specific subordinate issues in any proceeding involving a construction permit for a production or utilization facility and may not be used to determine the ultimate issue as to whether a construction permit shall be authorized. Section 2.749(d).

<sup>1</sup>The term "alternate board member" as a "special assistant" should not be confused with use of the term "alternate" in 10 CFR 2.721(b). In the latter situation the "alternate" is a substitute for a member of a Board who becomes unavailable. See generally *New England Coalition on Nuclear Pollution v. NRC*, 582 F.2d 87, 99-100 (1st Cir. 1978). In this rule (10 CFR 2.722(a)(3)), the "alternate" sits with the three-member Board and not instead of the Board or any of its members.

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consistent with the general policy of the Commission's Rules of Practice to encourage parties to express their views before adjudicatory tribunals. The amendment also harmonizes the Commission's summary disposition procedure with the provisions of 10 CFR 2.730(c), "Motions," which permit a party to file an answer in support of or in opposition to a motion filed by another party.

Since statements in support of a motion for summary disposition may raise facts and arguments not presented by the moving party and need not be served until the time at which an answer opposing the motion must be served, § 2.749(a) is also amended to permit the party opposing the motion to file a supplemental response in writing which addresses any new matters raised in supporting statements and not presented in the initial motion. The Commission expects its presiding officers to establish expeditious time limits on a case-by-case basis for the filing of any response to supporting statements, consistent with the requirements of fairness. This departure from Commission practice (which does not ordinarily allow further pleadings beyond the initial pleading and response thereto) is desirable here to avoid potential unfair surprise to parties opposing motions for summary disposition. No further supporting statements or responses thereto shall be entertained.

Because this amendment is not substantive and relates only to matters of agency procedure, notice of proposed rulemaking, and public procedure thereon, is unnecessary, and the amendment is effective on October 17, 1980 without the customary 30 days notice.

(5 U.S.C. 553(b) and 553(d))

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of Title 5 of the United States Code, the following amendments to Title 10, Chapter 1, Code of Federal Regulations, Part 2 are published as a document subject to codification.

➤ 45 FR 69877

Published 10/22/80

Effective 11/21/80

### 10 CFR Part 2

#### Changes in Rules of Practice Governing Discipline in Adjudicatory Proceedings

AGENCY: U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is amending its regulations governing discipline in adjudicatory hearings, 10 CFR 2.713, to (1) reiterate the standard of conduct expected of participants in proceedings; (2) clarify who may appear before NRC in a representative capacity; (3) clarify and bolster the authority of the presiding officer, Appeal Board, and Commission to suspend any party or representative of a party from participation in a particular proceeding where, as a result of the party's or representative's conduct, this is necessary for the orderly conduct of the proceeding; and (4) specify special interlocutory appeal procedures governing suspensions from participation.

**EFFECTIVE DATE:** November 21, 1980.

**FOR FURTHER INFORMATION CONTACT:** Bruce A. Berson, Office of the Executive Legal Director, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Telephone (301) 492-7878.

**SUPPLEMENTARY INFORMATION:** On January 18, 1980, the Nuclear Regulatory Commission published in the *Federal Register* (45 CFR 3594) a proposed amendment to its regulations, 10 CFR Part 2—"Rules of Practice for Domestic Licensing Proceedings," regarding representation and conduct of attorneys in adjudicatory proceedings. Interested persons were invited to submit comments for consideration in connection with the proposed amendment by March 3, 1980.

Four comment letters were received from interested persons during the 45 day comment period. The comments addressed the following issues:

1. The necessity for the rule;
2. The standards of conduct;
3. Representation at NRC proceedings;
4. The process of appealing suspensions; and
5. Referral of suspended attorneys to the state bar.

After careful consideration, the Commission has determined that no changes to the proposed rule based on the comments are necessary. However, the Commission has revised and broadened the process of appealing suspensions and made two other minor clarifications to the rule based upon its own review. The clarifications (1) add the words "or officer" to the second sentence of § 2.713(b) following "duly authorized member" to reflect actual practice and the intent of the rule; and (2) provide for mandatory referral of an attorney suspended for more than 1 day to the appropriate state bar even in the absence of an appeal. (Issues 3 and 5 below). The revision to the process of

appealing suspensions is discussed below (Issue 4).

The public comments and changes made by the Commission are discussed below.

1. Necessity for the rule: Two commenters believe the rule is unnecessary. One suggests that the presiding officer has adequate existing authority under 10 CFR 2.718, "Power of the Presiding Officer," to control the conduct of the proceeding and the other states that local authorities could be called if a true disturbance were created. Although disciplinary authority may be implied from 10 CFR 2.718(e), the Commission believes it is preferable to specifically codify such authority and the associated procedures after public notice and opportunity for comment. The Commission also believes presiding officers and other NRC tribunals should have specific authority to discipline representatives in NRC proceedings, when necessary, without routinely requesting (or waiting for a situation to require) the assistance of local law enforcement authorities, as suggested by the second commenter.

2. Standards of conduct: Three commenters express the view that the types of conduct enumerated in proposed § 2.713(c)(1) which may result in the suspension of a representative from a proceeding are vague, overly broad, or subject to abuse by a presiding officer. One commenter also states that the meaning and consequence of "censure" are not defined.

The rule is designed to be read and applied in light of its purpose. Therefore, presiding officers will generally apply judicially developed precedents governing contempt in imposing and fashioning appropriate disciplinary sanctions. Since the presiding officer is charged with conducting a fair proceeding in a reasonable and even-handed manner, he or she is expected to apply the provisions of this rule in a similar fashion. The Commission recognizes that a presiding officer might, on occasion, erroneously suspend a representative from a proceeding for conduct not warranting such action. The appeal process provided in the rule would correct any such error. Therefore, the Commission expects no abuse of the disciplinary standards.

The Commission believes the meaning and consequence of censure are self-explanatory. Censure, public or private, is generally a more appropriate remedy for an isolated instance of misconduct than suspension. In addition, the rule makes clear what conduct is expected of representatives. (See generally, ABA Code of Professional Responsibility and Ethical Considerations, EC-7-34 through and including 7-39 and 8-5.)

## PART 2 • STATEMENTS OF CONSIDERATION

**3. Representation at NRC proceedings:** One commenter suggests that "the restriction of attorney-at-law to only those admitted to the bar of U.S. or District of Columbia Courts or the highest court of any State, territory, or possession of the United States may well work to deprive public-interest intervenors of otherwise well-qualified counsel or other legal representation." The Commission believes the restriction is appropriate because admission before one of the specified courts is generally required before an attorney may be licensed to engage in the practice of law in a particular jurisdiction.

The Commission has determined that the words "or officer" should be added to the second sentence of § 2.713(b), following "duly authorized member." The clarification makes clear that a partnership, corporation or unincorporated association may be represented by a duly authorized officer, as well as by a member or attorney and reflects both actual practice and the intent of the rule.

**4. Process of appealing suspensions:** The provisions for appealing suspensions received a number of comments. Two commenters express concern that the appeals process requires a suspended individual to overcome a presumption of guilt and establish his or her innocence. The Commission disagrees with the characterization. Although there is some presumption that the action of a lower administrative tribunal is correct, the Commission or an Atomic Safety and Licensing Appeal Board need not accede to a lower board's decision simply because it is supported by "substantial evidence" or is not "clearly erroneous." See *Duke Power Company* (Catawba Nuclear Station, Units 1 and 2), ALAB-355, 4 NRC 397 (1976).

Another commenter recommends that a proceeding be automatically stayed whenever a representative is suspended, even for one day or less. The commenter notes that disciplinary action normally focuses on the conduct of the representative rather than the party and recommends that the "necessary to prevent injustice" standard governing the granting of a stay in § 2.714(c)(2) be deleted. She recommends instead that the party be given the option of electing either an automatic stay pending completion of the suspension (or final disposition of the appeal, if appealed) or a stay for a reasonable period of time in which to secure other representation.

The Commission believes that the proposed rule adequately protects the interests of an affected party by permitting a stay for a reasonable period of time in order to obtain other

representation if necessary to prevent injustice. Whether a stay should be granted in a particular case should be left to the discretion of the presiding officer, since that individual will be most familiar with the procedural posture of the proceeding and the impact of the suspension upon the parties. Under the commenter's proposal, a lengthy suspension could translate into a day-for-day stay of the entire proceeding, even though alternative representation might be available much sooner. This could add unnecessary delay to licensing proceedings.

The commenter also suggests the establishment of an alternative appeals process in cases in which the Commission itself orders a suspension so that the Commission does not also function as the appellate body. Since the Commission acts as a collegial body in licensing proceedings, there will be no further administrative appeal of suspensions it orders. Judicial review would be available to a suspended representative. Therefore, the Commission believes an alternative appeals process is unnecessary.

One commenter suggests that the rule be amended to require the completion of an appellate hearing within 10 days of the imposition of the suspension or else the suspension should be revoked, not merely lifted. According to the commenter, this change is designed to prevent an automatic 10-day non-reviewable suspension. The Commission notes that it may not always be practical to complete a hearing within 10 days of the imposition of a suspension because the rule provides 10 days for filing an appeal. Since proposed § 2.713(c)(3) directs that a necessary hearing shall commence as soon as possible after the filing of an appeal, the Commission believes that the intent of the comment is met.

However, after its own further review, the Commission has decided to broaden and revise the process for appealing suspensions in three respects. First, an appeal of a reprimand, censure, or suspension not exceeding 1 day is authorized. The proposed rule limited review to suspensions exceeding 1 day. The Commission believes that a right to appeal any sanction imposed pursuant to this section is desirable because, at least in the case of an attorney, an administratively unappealable sanction may saddle an individual with an irrevocable, and possibly unjustified, professional "black mark." In the District of Columbia, for example, an applicant for admission to the bar must state whether he or she has been suspended, reprimanded or censured as an attorney.

Second, the Commission has revised the proposed rule to delay the effectiveness of suspensions exceeding 1 day for a period of 72 hours from the time of the suspension order to permit the suspended individual to request a stay of the sanction from the reviewing tribunal pending appeal. A timely stay request will stay the imposition of the sanction until the reviewing tribunal rules on the motion. Ten days are provided for the Commission or Appeal Board, as appropriate, to rule on the motion. All time limits will be computed in accordance with 10 CFR 2.710. Responses to the stay request from other parties will not be entertained since they have no substantial interest in the disposition of the motion. In ruling on the motion, the reviewing tribunal will consider only the first two stay factors specified in 10 CFR 2.788(e) (whether the moving party has made a strong showing that it is likely to prevail on the merits and whether the party will be irreparably injured unless a stay is granted). The third and fourth factors (harm to other parties and the public interest) are excluded because each has little bearing on the proper disposition of the motion. This mechanism is provided in a new § 2.713(c)(4).

Finally, the Commission has modified the third sentence of proposed § 2.713(c)(3) to require an Atomic Safety and Licensing Appeal Board or the Commission, as appropriate, to consider each appeal on the merits. The modification will ensure that an appeal would not be declared moot if the suspension has been "served" prior to appellate consideration.

**5. Referral to the state bar:** One commenter recommends deletion of the provision of proposed § 2.713(c)(3) relating to notification of the appropriate state bar(s) if an attorney's suspension is upheld at the conclusion of the appeal, since no corresponding sanctions are imposed on non-lawyers and no pattern of attorney misconduct is cited. The Commission does not agree with this recommendation. Attorneys have an independent ethical obligation under the American Bar Association's Code of Professional Responsibility to refrain from engaging in undignified or discourteous conduct when appearing before a court or administrative tribunal. (DR 7-106(c)(6)). Therefore, referral to the state bar(s) is appropriate in such cases.

However, proposed § 2.713(c)(3) implies that if an attorney receives a suspension exceeding 1 day and does not appeal, there is no referral to the state bar. The Commission has clarified the rule by requiring mandatory referral of attorneys whose suspensions exceed 1 day even when no appeal is taken.



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Referral should not depend upon whether an appeal is taken. Logic teaches that a suspended attorney who does not appeal may be more guilty than his peer who elects to appeal; therefore, both attorneys should be referred to the state bar if the suspension exceeds 1 day.

Pursuant to section 161(p) of the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552, 553 and 555(b) of Title 5 of the United States Code, the following amendments to Title 10, Chapter 1, Code of Federal Regulations, Part 2 are published as a document subject to codification, to be effective on November 21, 1980.



## PART 9 • STATEMENTS OF CONSIDERATION

amendment to Title 10, Chapter I, Code of Federal Regulations, Part 9 is published as a document subject to codification.

45 FR 17129  
Published 3/18/80  
Effective 4/17/80

### 10 CFR Part 9

#### Privacy Act Regulations; Notice of Exemptions

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is publishing exemptions as provided under the Privacy Act of 1974. This amendment of the Commission's regulation "Public Records" exempts from certain requirements of the Privacy Act portions of a new system of records "Document Control System, NRC-29."

**EFFECTIVE DATE:** April 17, 1980.

**FOR FURTHER INFORMATION CONTACT:** Joseph M. Felton, Director, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Telephone: 301-492-7211.

**SUPPLEMENTARY INFORMATION:** The Nuclear Regulatory Commission published a notice of proposed exemptions which would exempt from the Privacy Act portions of a proposed new system of records "Document Control System" in the *Federal Register* on August 28, 1979 (44 FR 50353). The notice invited public comment on the proposed exemptions by September 27, 1979. No comments were received on the proposed exemptions. The NRC is now publishing a final rule exemption to NRC-29. Simultaneously with the publication of this rule, the final rule creating the new Document Control System is being published.

The amendment of § 9.95 of 10 CFR Part 9 set forth below exempts from certain requirements of the Privacy Act portions of the system of records NRC-29.

Specific exemptions from the requirements of the Privacy Act pertaining to proposed NRC-29 are intended to prevent access to records that contain information specifically authorized under Executive Order (E.O.

12065) to be kept secret in the interest of the national defense and foreign policy.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of Title 5 of the United States Code, the following amendment to Title 10, Chapter I, Code of Federal Regulations, Part 9, is published as a document subject to codification.

➤ 45 FR 70225

Published 10/23/80  
Effective 10/23/80

### 10 CFR Part 9

#### Revised Costs for the Reproduction of Agency Records

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is amending its regulations to reflect the new costs for the reproduction of records made available to the public. The revised rates reflect specific costs in a copying service contract that was awarded after competitive bidding.

**EFFECTIVE DATE:** October 23, 1980.

**FOR FURTHER INFORMATION CONTACT:** Lynn Scattolini, Chief, Public Document Room, Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: 202-634-3273.

**SUPPLEMENTARY INFORMATION:** Requests by the public for the reproduction of records at the NRC Public Document Room in Washington, DC, have traditionally been accommodated by a copying service contractor. The NRC recently solicited bids for a new contract, and a contract has been awarded to Literature Research Company. The changes in copying costs to the public which result from the letting of the new contract are reflected in the amendments below to paragraph (a) of § 9.14. In addition, paragraph (b) of § 9.14 has been revised to reduce the per page copying cost for documents made available at locations other than the Public Document Room. Further information on the services available at the Public Document Room are described in NUREG/BR-0004, Public Document Users Guide.

A single copy of this publication may be obtained after November 1, 1980, by

writing to the U.S. Nuclear Regulatory Commission, Public Document Room, Washington, D.C. 20555.

Since these amendments reduce the costs for reproducing records, and because they reflect the specific costs in a copying service contract recently awarded after competitive bidding, notice of proposed rulemaking and public comment are unnecessary, and good cause exists to make the amendments effective upon publication in the *Federal Register*.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of Title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Part 9 are published as a document subject to codification.

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from licensees to NRC following significant events at operating nuclear power reactors.

**EFFECTIVE DATE:** February 29, 1980.

**FOR FURTHER INFORMATION CONTACT:** Dudley Thompson, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, phone 301-492-8177.

**SUPPLEMENTARY INFORMATION:** The capability of the NRC to make timely decisions and to provide adequate assurances regarding actual or potential threats to public health and safety, depends heavily on the rapidity with which significant events are communicated by nuclear power reactor licensees to NRC. The majority of events occurring throughout the nuclear industry pose little or no serious or immediate threats to the public health and safety; however, certain events do pose such threats or generate fear or unusual concern.

NRC has an important obligation to collect facts quickly and accurately about significant events, assess the facts, take necessary action, and inform the public about the extent of the threat, if any, to public health and safety. Not only must NRC act promptly to prevent or minimize possible injury to the public, it must also take appropriate action to alleviate fear or concern created as a result of such events.

After the accident at Three Mile Island on March 28, 1979, the NRC staff acted to ensure the timely and accurate flow of information from licensees of operating nuclear power reactors following significant events. Dedicated telephone lines have been installed from all operating power plants to the NRC Operations Center and the Regional Offices. A line is located in each control room with provisions made for extensions to be located at other specified locations at the facility. When these phones are picked up to report significant events, they automatically ring at the NRC Operations Center and can be held open as long as needed.

NRC's Office of Inspection and Enforcement (OIE) issued Bulletins and sent letters requesting each licensee to review its prompt reporting procedures to NRC. These were intended to make certain that each licensee notifies NRC within one hour of the time the reactor is not in a controlled or expected condition of operation. Once the licensee has notified NRC, an open, continuous communication channel is established and maintained between the licensee and NRC.

The NRC staff has continued to evaluate licensees' responses to OIE's Bulletins and letters and to analyze the kinds of significant events that should be reported immediately. By their very

nature, OIE's Bulletins and letters did not impose requirements on licensees, and in several instances licensees have not immediately reported significant events to NRC. Moreover, the Bulletins and letters did not describe in sufficient detail the specific types of significant events NRC determined had to be reported immediately. The Commission has found that in order to take necessary action to protect the health and safety of the public, twelve types of significant events should be reported immediately (within one hour) to it. Consequently, NRC has decided to publish a rule requiring the immediate reporting by telephone of these events. The events, which are described in detail in the rule, include serious events that could result in an impact on the public health and safety such as those leading to initiation of the licensee's emergency plan or any section of the plan, the causing of the nuclear power plant to be in an uncontrolled condition, the exceeding of a safety limit, an act of sabotage, or an uncontrolled release of radioactivity. With regard to initiation of the licensee's emergency plan, the Commission is presently in the process of promulgating a rule concerning requirements for emergency plans for nuclear power plants. Meanwhile, the Commission has published guidance on emergency preparedness at operating nuclear power plants in NUREG-0610. This guidance has been sent to all affected licensees.

In view of (1) the significance of these twelve types of events with respect to their ability to jeopardize the health and safety of the public, (2) the fact that most of these events are not required presently to be reported immediately to NRC, (3) the problem of licensees not having reported such events to NRC after receipt of OIE's Bulletins and letters, and (4) NRC's immediate need to know in order to act quickly, NRC has determined that there is good cause to waive the opportunity for the public to comment on this rule before its effective date, and has determined, therefore, that it is in the public interest to make this rule effective immediately.

Although this rule is being published in effective form without a prior public comment period, the public is invited to submit its views and comments. If possible, these comments should be submitted by April 29, 1980. After reviewing any views and comments submitted, the Commission may reconsider or modify the rule as it deems necessary.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy

Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendments to 10 CFR Part 20 and 10 CFR Part 50 are published as a document subject to codification.

45FR14199

Published 3/5/80

Effective 3/5/80

*Minor and Clarifying Amendments*

See Part 1 Statements of Consideration

45 FR 18905

Published 3/24/80

Effective 3/24/80

*Deletion of Reference to Panama Canal Zone; Minor Amendments*

See Part 4 Statements of Consideration.

➤ 45 FR 71761  
Published 10/30/80  
Effective 1/28/81

### 10 CFR Part 20

#### Standards for Protection Against Radiation; Burial of Small Quantities of Radionuclides

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is amending its regulations to require NRC licensees to obtain specific approval to bury small quantities of radionuclides. Current NRC regulations provide that licensees may bury certain small quantities of radionuclides without prior approval. The amendments will provide greater assurance that buried radioactive material will not present a health hazard.

**EFFECTIVE DATE:** January 28, 1981.

**Note.**—The Nuclear Regulatory Commission has submitted this rule to the Comptroller General for such review as may be appropriate under the Federal Reports Act, as amended, 44 U.S.C. 3512. The date on which the reporting requirement of this rule becomes effective, unless advised to the contrary, reflects inclusion of the 45-day period which that statute allows for such review (44 U.S.C. 3512(c)(2)).

## PART 20 • STATEMENTS OF CONSIDERATION

### FOR FURTHER INFORMATION CONTACT:

Mr. John W. N. Hickey, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone: 301-443-5966).

### SUPPLEMENTARY INFORMATION:

On December 4, 1978, the Nuclear Regulatory Commission (NRC or Commission) proposed to delete § 20.304 of 10 CFR Part 20, "Standards for Protection Against Radiation" (43 FR 56677). Section 20.304 allows licensees to bury certain small quantities of radionuclides without prior NRC approval.

As discussed in the notice of proposed rulemaking, several State representatives have suggested that the risk from burials of radioactive waste allowed by § 20.304 may be unacceptable. The quantities of radionuclides allowed to be buried pursuant to § 20.304 are 1,000 times greater than exempt quantities. Such quantities pose a small risk if they are properly buried and left undisturbed, particularly if they are dispersed through a large volume of waste material. However, § 20.304 imposes no concentration limits, and the quantities as concentrated "point sources" are potentially large enough to cause excessive radiation exposures if the radioactive material is mishandled, improperly buried, or disturbed after burial. For example, § 20.304 allows burial of up to one millicurie of cobalt-60. As a point source this quantity delivers a dose rate of over 100 millirems per hour at a distance of 10 centimeters. If a burial site were disturbed, and a person came into contact with one millicurie of cobalt-60 for an extended period, an overexposure could occur.

The Commission has concluded that it is inappropriate to continue generic authorization of burials pursuant to § 20.304 without regard to such factors as location of burial, concentrations of radioactive material, form of packaging, and notification of NRC. Therefore, the Commission will require that licensees obtain prior approval for new burials of the type currently allowed by § 20.304, and accordingly § 20.304 is being deleted from NRC regulations. Prior review of proposed burials will result in improved records regarding amounts and locations of future burials of radioactive material, and provide greater assurance that buried material will not present a health hazard at a later date. Thus, the risk of exposure of individuals accidentally disturbing buried radioactive waste would be reduced.

The Commission staff estimates that fewer than 100 licensees (out of about 20,000 NRC and Agreement State

licensees) are performing burials allowed by § 20.304. NRC licensees will have 90 days to halt burials and apply for specific approval to resume burials pursuant to 10 CFR 20.302, or use alternative disposal methods such as transfer of waste to licensed commercial burial grounds. The NRC staff will provide information to licensees as appropriate related to obtaining approval for burials. Deletion of 10 CFR 20.304 will not affect material already buried, generally licensed and exempt material, or licensees who have already obtained specific approval to perform burials pursuant to 10 CFR 20.302.

Agreement State licensees will not be directly affected by the final rule, because they are subject to individual State regulations rather than NRC regulations. However, Agreement State officials have consistently supported deletion of § 20.304, and the Commission anticipates that those States which have not already done so will make changes in their regulations compatible with deletion of § 20.304.

As discussed in the notice of proposed rulemaking, the Commission has determined that an environmental impact statement need not be prepared because deletion of 10 CFR 20.304 will not significantly affect the quality of the human environment.

### Public Comments

In reaching the decision to delete § 20.304, the Commission considered public comments received on the proposed rule change. These comments and the impact of deletion of § 20.304 are discussed in the value-impact assessment, which is available for inspection or copying for a fee at the NRC Public Document Room, 1717 H Street, Washington, D.C. 20555. The major public comments received are discussed below.

Thirty-eight sets of public comments were received on the proposed deletion of § 20.304. Seventeen commenters favored deletion, fourteen opposed deletion, and seven took no clear position. The major comments opposing deletion are: (1) Burials pursuant to § 20.304 do not represent a public health problem, (2) disposal of wastes at commercial burial grounds is not a good alternative because it is too expensive, it carries its own risks, and the commercial sites are overburdened, and (3) NRC has not adequately outlined requirements for obtaining specific approvals for burials.

1. *Public health risk.* Several comments from institutions performing burials pursuant to § 20.304 provided information on their operations, indicating that their burial sites are safe because they are owned by the licensee, fenced and marked, located in areas of

low risk of ground water contamination, or contain short-lived radionuclides in waste with low specific activity. Nevertheless, as discussed previously, the radionuclide quantities involved are potentially large enough to cause significant radiation exposures, if they are concentrated point sources, and the Commission has decided that case-by-case review of proposed burials is appropriate.

2. *Commercial burial grounds.* Many commenters incorrectly interpreted the proposed rule to mean that local burial would be prohibited, and that all waste would have to be shipped to commercial burial grounds. The Commission is not requiring that all radioactive waste affected by deletion of § 20.304 be shipped to commercial burial grounds. Licensee proposals for waste disposal will be reviewed on a case-by-case basis, including consideration of risk and economic costs. This is consistent with § 20.1(c) which provides that licensees should make every reasonable effort to maintain radiation exposures as low as is reasonably achievable, where "as low as is reasonably achievable" includes taking into account economics of improvement in relation to benefits to the public health and safety.

Several licensees performing burials pursuant to § 20.304 commented that it would be too expensive to ship wastes to commercial burial sites, and that in any case the sites are already overburdened. Estimates of the extra costs and volumes of waste involved ranged from \$400 to \$21,000 and 70 to 2000 cubic feet per year. It should be noted that: (1) The staff estimates that fewer than 100 licensees are performing burials pursuant to § 20.304, (2) until recently about 3,000,000 cubic feet of radioactive waste were being shipped annually to commercial sites, and (3) many institutions similar to those using § 20.304 are using commercial disposal sites. Therefore, while certain licensees may wish to dispose of high-volume, slightly contaminated waste by local burial for justifiable economic reasons, in many cases licensees could ship low-volume waste to commercial sites at reasonable cost without adding significantly to the total volume accepted at the sites.

The Commission recognizes problems associated with closures or reduced capacity of commercial burial grounds. This issue affects all licensees disposing of low-level radioactive waste, not just burials pursuant to § 20.304. The Commission staff will, of course, take into account the status of commercial burial sites in making any licensing decisions regarding disposal of radioactive waste.

3. *Criteria for disposal.* As discussed in the notice of proposed rulemaking,

## PART 20 • STATEMENTS OF CONSIDERATION

the Commission is reviewing existing policy on disposal of low-level radioactive waste and developing new regulations. These will be published in separate notices of proposed rulemaking. Until new regulations are developed, applications for waste disposal will be reviewed according to § 20.302, which requires licensees to submit information describing the waste material, the levels of radioactivity involved, the proposed conditions of disposal, the environment of the disposal site, and procedures to be observed to minimize the risk of unexpected or hazardous exposures.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Part 20, are published as a document subject to codification.





## PART 25 • STATEMENTS OF CONSIDERATION

### SUPPLEMENTARY INFORMATION:

CFR Part 25, "Access Authorization for Licensee Personnel," and 10 CFR Part 95, "Security Facility Approval and Safeguarding of National Security Information and Restricted Data," were published as final rules in the *Federal Register* on March 5, 1980 (45 FR 14476), each with an effective date of May 19, 1980. In order to provide additional time to furnish necessary administrative guidance to affected licensees, and for the licensees to be able to achieve compliance with the regulations, the NRC is extending the effective date of 10 CFR Parts 25 and 95 to October 1, 1980. Since the amendment relates solely to a minor procedural matter, notice of proposed rulemaking and public procedure thereon are unnecessary, and good cause exists to make the amendments effective October 1, 1980 in the *Federal Register*.

In *Federal Register* Document 80-6526, appearing at pages 14476 thru 14493 of the *Federal Register* for March 5, 1980, the EFFECTIVE DATE of the final rules, 10 CFR Parts 25 and 95, which appears at page 14476, column 1, is changed from May 19, 1980 to October 1, 1980.

45256) to provide the Nuclear Regulatory Commission (NRC) additional time to furnish necessary administration guidance and for licensees to be able to achieve compliance with the regulations. The existing provisions of § 25.17 require that a complete set of NRC personnel security forms be completed as part of an application for a security clearance with NRC. This requirement was based on existing procedures and the necessity for the NRC Division of Security to review these forms and then seek copies of existing reports of investigations or initiate requests for new investigations. Realizing that many individuals already possess a security clearance or access authorization granted by another Federal agency and realizing that these security clearances were based on the same or very similar criteria and procedures, NRC sought to eliminate or substantially reduce the burden on licensees and their employees in obtaining an NRC security clearance. In this regard, the Commission, on July 17, 1980, approved a policy change in NRC's personnel security program that permits the NRC Division of Security to accept the certification of an individual's existing security clearance granted by another Federal agency and also eliminates the requirement to review reports of investigations. Based on this decision, the NRC Division of Security will not require new investigations for those individuals who had or were in processing for another Federal security clearance on October 1, 1980. This action may expedite the security clearance processing of individuals affected by this Part and may reduce the cost to licensees since new investigations will not be initiated. Additionally, the NRC Division of Security has decided to waive the forms requirements of § 25.17 for those individuals who possessed or who were in processing for another Federal security clearance on October 1, 1980. These amendments to 10 CFR Part 25 modify § 25.17 to permit individuals and licensees affected by this Part to submit applications in accordance with these revised procedures. Applications received after October 1, 1980 will be processed in accordance with the provisions of Part 25 and guidance supplied to licensees by the NRC Division of Security.

These revisions will substantially reduce the public burden by cutting the cost and reporting time required of licensees seeking NRC security clearances for their employees. These revisions will also reduce the burden on NRC by cutting the time and cost in processing applications for clearance. Furthermore, these revisions reflect public comments made during extensive

discussions at public meetings held in Silver Spring, MD in April and May 1980. Therefore, the Commission for good cause finds that, in accordance with 5 U.S.C. 553(b) and (d), public comment procedures are not required, and these revisions become effective October 30, 1980.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and §§ 552 and 553 of Title 5 of the United States Code, the following amendments to 10 CFR Part 25 are published as a document subject to codification:

➤ 45 FR 71763  
Published 10/30/80  
Effective 10/30/80

### 10 CFR Part 25

#### Access Authorization for Licensee Personnel

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Commission is amending its regulation "Access Authorization for Licensee Personnel" to comply with a Commission policy easing security forms requirements for those individuals already possessing a security clearance granted by another Federal agency.

**EFFECTIVE DATE:** October 30, 1980.

**FOR FURTHER INFORMATION CONTACT:** Duane G. Kidd, Chief, Security Policy Branch, Division of Security, Office of Administration, United States Nuclear Regulatory Commission, Washington, D.C. 20555 (301) 427-4415.

**SUPPLEMENTARY INFORMATION:** 10 CFR Part 25, "Access Authorization for Licensee Personnel," was published in the *Federal Register* on March 5, 1980 (45 FR 14476) with an effective date of May 19, 1980. The effective date was changed to October 1, 1980 in a *Federal Register* Notice dated July 3, 1980 (45 FR



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reasons exist for reactor operation. Finally, pursuant to 10 CFR 2.202(f), the Commission may, in appropriate circumstances, make the order immediately effective, which could result in immediate plant shutdown subject to a later hearing.

### IX. Funding

In view of the requirements in these rule changes regarding the actions to be taken in the event State and local government planning and preparedness are or become inadequate, a utility may have an incentive, based on its own self interest as well as its responsibility to provide power, to assist in providing manpower, items of equipment, or other resources that the State and local governments may need but are themselves unable to provide. The Commission believes that in view of the President's Statement of December 7, 1979, giving FEMA the lead role in offsite planning and preparedness, the question of whether the NRC should or could require a utility to contribute to the expenses incurred by State and local governments in upgrading and maintaining their emergency planning and preparedness (and if it is to be required, the mechanics for doing so) is beyond the scope of the present rule change. It should be noted, however, that any direct funding of State or local governments solely for emergency preparedness purposes by the Federal government would come through FEMA.

### X. Exercises

On an annual basis, all commercial nuclear power facilities will be required by NRC to exercise their plans; these exercises should involve exercising the appropriate local government plans in support of these facilities. The State may choose to limit its participation in exercises at facilities other than the facility (site) chosen for the annual exercise(s) of the State plan.

Each State and appropriate local government shall annually conduct an exercise jointly with a commercial nuclear power facility. However, States with more than one facility (site) shall schedule exercises such that each individual facility (site) is exercised in conjunction with the State and appropriate local government plans not less than once every 3 years for sites with the plume exposure pathway EPZ partially or wholly within the State, and not less than once every 5 years for sites with the ingestion exposure pathway EPZ partially or wholly within the State. The State shall choose, on a rotational basis, the site(s) at which the required annual exercise(s) is to be conducted; priority shall be given to new facilities

seeking an operating license from NRC that have not had an exercise involving the State plan at that facility site.

The Commission has determined under the criteria in 10 CFR Part 51 that an environmental impact statement for the amendments to 10 CFR Part 50 and Appendix E thereof is not required. This determination is based on "Environmental Assessment for Final Changes to 10 CFR Part 50 and Appendix E of 10 CFR Part 50, Emergency Planning Requirements for Nuclear Power Plants" (NUREG-0685, June 1980). Comments on the "Draft Negative Declaration: Finding of No Significant Impact" (45 FR 3913, January 21, 1980) were considered in the preparation of NUREG-0685.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that the following amendments to Title 10, Chapter I, Code of Federal Regulations, Parts 50 and 70, are published as a document subject to codification.

45 FR 62789

Published 9/22/80

Effective 10/22/80

### 10 CFR Part 50

#### Domestic Licensing of Production and Utilization Facilities; Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is amending the portion of one of its regulations that provides requirements for leak testing of containment building air locks in order to permit greater flexibility for such testing in the case of frequent use of the air locks.

**EFFECTIVE DATE:** October 22, 1980.

**FOR FURTHER INFORMATION CONTACT:** E. G. Arndt, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, DC 20555 (301-443-5997).

**SUPPLEMENTARY INFORMATION:** On January, 11, 1980, the Nuclear Regulatory Commission published in the Federal Register (45 FR 2330) a proposed amendment to its regulation 10 CFR Part 50, "Licensing of Production and Utilization Facilities" which would amend Appendix J, "Primary Reactor

Containment Leakage Testing for Water-Cooled Reactors," with regard to Type B testing requirements. Interested persons were invited to submit written comments by February 25, 1980. Three sets of comments were received. After consideration of the comments received and other factors involved, the Commission has adopted the amendment to Appendix J, 10 CFR Part 50, as published for public comment.

Copies of the comments, an abstract of comments containing staff responses, and the value/impact analysis supporting the rule, are available for public inspection at the Commission's Public Document Room at 1717 H Street, NW., Washington, DC. Single copies may be obtained on request from the Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: E. G. Arndt.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553, title 5 of the United States Code, the following amendment to 10 CFR Part 50 is published as a document subject to codification.

➤ 45 FR 71569

Published 10/29/80

Effective 10/29/80

### 10 CFR Part 50

#### Fire Protection Schedules for Operating Nuclear Power Plants

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is amending its regulations to temporarily suspend completion schedules for certain fire protection features in operating nuclear plants pending completion of its ongoing comprehensive fire protection rulemaking. This suspension is necessary because some NRC licensees are unable to meet fire protection implementation deadlines contained in licensed conditions. The Commission has found that fire protection measures already implemented give reasonable assurance of safety, and that no health and safety interest would be served by forcing certain licensees to shut down during the brief period between the license condition deadlines and the effectiveness of the final fire protection rule.

**EFFECTIVE DATE:** October 29, 1980.

## PART 50 • STATEMENTS OF CONSIDERATION

### FOR FURTHER INFORMATION CONTACT:

William Shields, Office of Executive Legal Director, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, phone 301-492-8696.

**SUPPLEMENTARY INFORMATION:** On May 29, 1980, the Commission published in the **Federal Register** (45 FR 36082) a Notice of Proposed Rulemaking entitled "Fire Protection Program for Nuclear Plants Operating Prior to January 1, 1979." The proposed rule provided that all fire protection modifications except alternate or dedicated shutdown capability would be required to be implemented by November 1, 1980, unless the Commission approve an extension for good cause. This deadline was also stated in the Commission's May 27, 1980 Memorandum and Order on the Union of Concerned Scientists Petition for Emergency and Remedial Action. 11 NRC 707, 719.

Many of the commenters on the proposed rule contended that the November 1 deadline was unachievable. Moreover, much more time than was earlier anticipated has been required to prepare a final rule on fire protection. Although the final rule is near completion, and will incorporate an implementation schedule different from that in the proposed rule, it has not yet been published and in any event would not be effective until 90 days after publication.

Certain NRC licensees, however, are at present operating under license conditions or technical specifications thereto which include the November 1 deadline or other dates which will precede the effective date of the final rule. To the extent that these licensees have been unable to complete all of the fire protection measures to which these deadlines apply, continued operation would violate the license conditions. The violation would extend only until the final rule becomes effective, since the implementation schedule contained in the final rule will supersede inconsistent license conditions.

The Commission has determined, based upon a review of the entire record in this rulemaking, that relief from these license conditions is appropriate pending promulgation of the final rule on fire protection applicable to all NRC licensees. Extensive fire protection measures have already been implemented at all operating plants. The implementation schedule of the final rule will be uniform and comprehensive, and will apply to all operating plants including those with different schedules contained in license conditions. No public health and safety interest would be served by forcing only those licensees unable to meet deadlines preceding the effectiveness of the final

rule to shut down for the brief interim. To the contrary, the fire protection measures already implemented give reasonable assurance that all operating nuclear plants may continue to operate safely even though the final rule will require additional fire protection measures at many plants.

The Administrative Procedure Act provides that a rule may be effective upon publication when that rule "grants or recognizes an exception or relieves a restriction." 5 U.S.C. 553(d)(1). This rule relieves certain NRC licensees from license conditions or technical specifications thereto in regard to fire protection implementation deadlines, and will therefore be effective upon the date of publication in the **Federal Register**. Furthermore, as noted above, the proposed rule stated that extensions from the November 1, deadline would be considered for good cause. Extensive public comment was received to the effect that the deadline was unrealistic and should be revised. Under these circumstances the Commission believes that there is good cause for an extension of the license condition schedules pending effectiveness of the final rule on fire protection.

The rule provides that all compliance dates contained in license conditions or technical specifications for required fire protection measures are suspended pending further action by the Commission. As is clear from the above discussion, that further action will be promulgation of the final rule on fire protection. The Commission intends that licensees affected by this rule should use best efforts to complete all required measures as soon as possible despite the suspension of the deadlines for this brief period.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that the following amendment to Title 10, Chapter I, Code of Federal Regulations, Part 50, is published as a document subject to codification.



## PART 73 STATEMENTS OF CONSIDERATION

Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following Amendment to Title 10 Chapter 1, Code of Federal Regulations, Part 73 is published as a document subject to codification.

### 10 CFR Part 73

#### **Physical Protection of Plants and Materials Requirements for the Physical Protection of Nuclear Power Plants**

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The U.S. Nuclear Regulatory Commission is extending from November 1, 1980 to December 1, 1980 its current relief from pat-down searches of regular employees at nuclear power reactors in order to allow time for the Commission to consider revisions to its rules in 10 CFR § 73.55 intended to finalize requirements for entry searches at such facilities.

**EFFECTIVE DATE:** October 31, 1980.

**FOR FURTHER INFORMATION CONTACT:** L. J. Evans, Jr., Chief, Regulatory Improvements Branch, Division of Safeguards, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, (301) 427-4181.

**SUPPLEMENTARY INFORMATION:** On July 31, 1979, the Commission changed the date from August 1, 1979, to November 1, 1979, when pat-down searches of regular employees of nuclear power plant licensees had to be implemented. The rationale for this extension was provided in the **Federal Register** notice on this subject, 44 FR 47758, August 15, 1979. The Commission further extended the implementation date to November 1, 1980. The rationale for that extension is contained in 44 FR 65969.

The Commission is presently considering issuing proposed revisions to 10 CFR § 73.55(d)(1) to finalize requirements for personnel searches at protected area portals of power reactors. The *thirty day* extension of the relief from physical pat-down searches of regular employees contained herein is intended to allow sufficient time for Commission consideration of the proposed revisions. Because this rule delays a requirement, and merely continues a temporary situation for a limited period of time, the Commission finds that notice and public procedure are unnecessary and that the change can be made immediate effective without the customary 30 days period of notice required by 5 U.S.C. 553.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy



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**UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS**

TITLE 10, CHAPTER 1. CODE OF FEDERAL REGULATIONS—ENERGY

**SUPPLEMENT NUMBER 5**

(November 3, 1980 - November 14, 1980)

**DATE ISSUED:**

November 24, 1980

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Note to subscribers: Tabs and dividers referred to in Supplement 1 are supplied to NRC personnel only.





## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

(a-1) *Early consideration of site suitability issues.* An applicant for a construction permit for a utilization facility which is subject to § 51.5(a) of this chapter and is of the type specified in §§ 50.21(b) (2) or (3) or 50.22 of this chapter or is a testing facility, may request that the Commission conduct an early review and hearing and render an early partial decision in accordance with Subpart F on issues of site suitability within the purview of the applicable provisions of Parts 50, 51 and 100 of this chapter. In such cases, the applicant for the construction permit may submit the information required of applicants by the provisions of this chapter in three or (in the case of nuclear power reactors) four parts:

(1) Part one shall include or be accompanied by any information required by §§ 50.34(a)(1) and 50.30(f) of this chapter which relates to the issue(s) of site suitability for which an early review, hearing and partial decision are sought, except that information with respect to operation of the facility at the projected initial power level need not be supplied, and shall include the information required by §§ 50.33(a)-(e) and 50.37 of this chapter. The information submitted shall also include (i) proposed findings on the issues of site suitability on which the applicant has requested review and a statement of the bases or the reasons for those findings, (ii) a range of postulated facility design and operation parameters that is sufficient to enable the Commission to perform the requested review of site suitability issues under the applicable provisions of Parts 50, 51 and 100, and (iii) information concerning the applicant's site selection process and long-range plans for ultimate development of the site required by § 2.603(b)(1).

(2) Part two shall include or be accompanied by the remaining information required by §§ 50.30(f), 50.33 and 50.34(a)(1) of this chapter.

(3) Part three shall include the remaining information required by §§ 50.34(a) and (in the case of a nuclear power reactor) 50.34a of this chapter.

(4) The information required for part two or part three shall be submitted during the period the partial decision on part one is effective. Submittal of the information required for part three may precede by no more than six months or follow by no more than six months the submittal of the information required or part two.

(5) Part four,<sup>2</sup> which is only required when the application is for a construction permit for a nuclear power reactor, shall include any information required by § 50.33a

of this chapter and shall be filed in accordance with the time periods specified in § 50.33a.

(b) After the application has been docketed, each applicant for a license for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee shall serve a copy of the application and environmental report, as appropriate, on the chief executive of the municipality in which the activity is to be conducted or, if the activity is not to be conducted within a municipality on the chief executive of the county, and serve a notice of availability of the application or environmental report on the chief executives of the municipalities or counties which have been identified in the application or environmental report as the location of all or part of the alternative sites, containing the following information: Docket number of the application; a brief description of the proposed site and facility; the location of the site and facility as primarily proposed and alternatively listed; the name, address, and telephone number of the applicant's representative who may be contacted for further information; notification that a draft environmental impact statement will be issued by the Commission and will be made available upon request to the Commission; and notification that if a request is received from the appropriate chief executive, the applicant will transmit a copy of the application and environmental report, and any changes to such documents which affect the alternative site location, to the executive who makes the request. In complying with the requirements of this paragraph (b) the applicant should not make public distribution of those parts of the application subject to § 2.790(d). The applicant shall submit to the Director of Nuclear Material Safety and Safeguards an affidavit that service of the notice of availability of the application or environmental report has been completed along with a list of names and addresses of those executives upon whom the notice was served.

(c) The notice published in the FEDERAL REGISTER announcing docketing of the antitrust information part of the application for a facility license under section 103 of the Act, except for those applications described in § 2.102(d) (2), will state that:

<sup>2</sup> For a construction permit application in four parts, part four shall be filed second in time since it must precede both parts two and three by a period of from 9 months to 3 years.

(1) The portion of the application filed contains the information requested by the Attorney General for the purpose of an antitrust review of the application as set forth in Appendix L to Part 50 of this chapter;

(2) Upon receipt and acceptance for docketing of the remaining portions of the application dealing with radiological health and safety and environmental matters, notices of receipt will be published in the FEDERAL REGISTER including an appropriate notice of hearing; and

(3) Any person who wishes to have his views on the antitrust matters of the application presented to the Attorney General for consideration should submit such views within sixty (60) days after publication of the notice announcing receipt of the antitrust information to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Chief, Antitrust and Indemnity Group.

(d) The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, will give notice of the docketing of the public health and safety, common defense and security, and environmental parts of an application for a license for a facility, or for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee, to the Governor or other appropriate official of the State in which the facility is to be located or the activity is to be conducted, and will cause to be published in the FEDERAL REGISTER a notice of docketing of the application which states the purpose of the application and specifies the location at which the proposed activity would be conducted.

(e) The notice published in the FEDERAL REGISTER of docketing of the application for a facility operating license under section 104b of the Act will, when appropriate, also state that any person who intervened or sought, by timely written notice to the Commission or the Atomic Energy Commission, to intervene in the construction permit proceeding for the facility to obtain a determination of antitrust considerations or to advance a jurisdictional basis for such determination may, within twenty-five (25) days after the date of publication, submit a written petition for leave to intervene and a request for a hearing on the antitrust aspects of the application.

### § 2.102 Administrative review of application.

(a) During review of an application by the staff, an applicant may be required to supply additional information. The staff may request any one party to the proceeding to confer with the staff informally. In the case of a docketed application for a construction permit or an operating license for a facility, the staff shall establish a schedule for its review of the application, specifying the key intermediate steps from the time of docketing until the completion of its review.

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(b) The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, will refer the docketed application to the ACRS as required by law and in such additional cases as he or the Commission may determine to be appropriate. The ACRS will render to the Commission one or more reports as required by law or as requested by the Commission.

(c) The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, will make each report of the ACRS a part of the record of the docketed application, and transmit copies to the appropriate State and local officials.

(d) (1) The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, will refer and transmit a copy of each docketed application for a construction permit or an operating license for a utilization or production facility under section 103 of the Act (and each request, in a proceeding for an operating license for a utilization or production facility under section 104b of the Act, by any person who intervened or sought by timely written notice to the Commission to intervene in the construction permit proceeding to obtain a determination of antitrust considerations or to advance a jurisdictional basis for such determination for an antitrust review under section 105c of the application for an operating license) to the Attorney General as required by section 105c of the Act.

(2) The requirements of subparagraph (1) of this paragraph (d) do not apply to an application for an operating license for a production or utilization facility under section 103 of the Act for which the construction permit was also issued under section 103, unless the Commission determines, after consultation with the Attorney General, that such review is advisable on the ground that significant changes in the licensee's activities or proposed activities have occurred subsequent to the previous review by the Attorney General and the Commission under section 105c of the Act in connection with the construction permit.

(3) The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, will cause the Attorney General's advice received pursuant to subparagraph (1) of this paragraph (d) to be published in the FEDERAL REGISTER promptly upon receipt, and will make such advice a part of the record in any proceeding on antitrust matters conducted in accordance with subsection 105c(5) and section 189a of the Act. The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, will also cause to be published in the FEDERAL REGISTER a notice that the Attorney General has not rendered any such advice. Any notice published in the FEDERAL REGISTER pursuant to this subparagraph will also include a notice of hearing, if appropriate, or will state that any person whose interest may be affected by the proceeding may, pursuant to and in accordance with § 2.714, file a petition for leave to intervene and re-

quest a hearing on the antitrust aspects of the application. The notice will state that petitions for leave to intervene and requests for hearing shall be filed within 30 days after publication of the notice.

### § 2.103 Action on applications for byproduct, source, special nuclear material, and operator licenses.

(a) If the Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, finds that an application for a byproduct, source, special nuclear material, or operator license complies with the requirements of the Act and this chapter, he will issue a license. If the license is for a facility or for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee, the Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, will inform the State and local officials specified in § 2.104(e)\* of the issuance of the license.

(b) If the Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, finds that an application does not comply with the requirements of the Act and this chapter he may issue a notice of proposed denial or a notice of denial of the application and inform the applicant in writing of:

(1) The nature of any deficiencies or the reason for the proposed denial or the denial, and

(2) The right of the applicant to demand a hearing within twenty (20) days from the date of the notice or such longer period as may be specified in the notice.

### HEARING ON APPLICATION—HOW INITIATED

#### § 2.104 Notice of hearing.

(a) In the case of an application on which a hearing is required by the Act or this chapter, or in which the Commission finds that a hearing is required in the public interest, the Secretary will issue a notice of hearing to be published in the FEDERAL REGISTER as required by law at least fifteen (15) days, and in the case of an application concerning a construction permit for a facility of the type described in § 50.21(b) or § 50.22 of this chapter or a testing facility, at least thirty (30) days, prior to the date set for hearing in the notice.<sup>1</sup>

In addition, in the case of an application for a construction permit for a facility of the type described in § 50.22 of this chapter, or a testing facility, the notice (other than a notice pursuant to paragraph (d) of this section) shall be issued as soon as practicable after the application has been docketed:

*Provided*, That if the Commission, pursuant to § 2.101(a)(2), decides to determine the acceptability of the application on the basis of its technical adequacy as well as completeness, the notice shall be issued as soon as practicable after the application has been tendered.

The notice will state:

(1) The time, place, and nature of the hearing and/or prehearing conference, if any;

(2) The authority under which the hearing is to be held;

(3) The matters of fact and law to be considered; and

(4) The time within which answers to the notice shall be filed.

(b) In the case of an application for a construction permit for a facility on which the Act requires a hearing, the notice of hearing will, except as provided in paragraph (d) of this section and unless the Commission determines otherwise, state, in implementation of paragraph (a)(3) of this section:

(1) That, if the proceeding is a contested proceeding, the presiding officer will consider the following issues:<sup>2</sup>

(i) Whether in accordance with the provisions of § 50.35a of this chapter;

(a) The applicant has described the proposed design of the facility, including, but not limited to, the principal architectural and engineering criteria

<sup>1</sup> If the notice of hearing concerning an application for a construction permit for a facility of the type described in § 50.21(b) or § 50.22 of this chapter or a testing facility does not specify the time and place of initial hearing, a subsequent notice will be published in the FEDERAL REGISTER which will provide at least thirty (30) days notice of the time and place of that hearing. After this notice is given the presiding officer may reschedule the commencement of the initial hearing for a later date or reconvene a recessed hearing without again providing thirty (30) days notice.

<sup>2</sup> Issues (1) to (iv) are the issues pursuant to the Atomic Energy Act of 1954, as amended. Issue (v) is the issue pursuant to the National Environmental Policy Act of 1969.

\* Amended 11/18/125

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for the design, and has identified the major features or components incorporated therein for the protection of the health and safety of the public;

(b) Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration will be supplied in the final safety analysis report;

(c) Safety features or components, if any, which require research and development, have been described by the applicant and the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components; and

(d) On the basis of the foregoing, there is reasonable assurance that (1) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of the proposed facility; and (2) taking into consideration the site criteria contained in Part 100 of this chapter, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

(ii) Whether the applicant is technically qualified to design and construct the proposed facility;

(iii) Whether the applicant is financially qualified to design and construct the proposed facility;

(iv) Whether the issuance of a permit for the construction of the facility will be inimical to the common defense and security or to the health and safety of the public;

(v) If the application is for a construction permit for a nuclear power reactor, a testing facility, a fuel reprocessing plant, or other facility whose construction or operation has been determined by the Commission to have a significant impact on the environment, whether, in accordance with the requirements of Part 51\*\* of this chapter, the construction permit should be issued as proposed.

(2) That, if the proceeding is not a contested proceeding, the presiding officer will determine (i) without conducting a de novo evaluation of the application, whether the application and the record of the proceeding contain sufficient information, and the review of the application by the Commission's staff has been adequate to support affirmative findings on subdivisions (i) through (iii) specified in subparagraph (1) of this paragraph (b) and a negative finding on

subdivision (iv) specified in subparagraph (1) of this paragraph (b) proposed to be made and the issuance of the construction permit proposed by the

Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate; and (ii) if the application is for a construction permit for a nuclear power reactor, a testing facility, a fuel reprocessing plant, or other facility whose construction or operation has been determined by the Commission to have a significant impact on the environment, whether the review conducted by the Commission pursuant to the National Environmental Policy Act (NEPA) has been adequate.

(3) That, regardless of whether the proceeding is contested or uncontested, the presiding officer will, in accordance with Part 51\*\* of this chapter.

(i) Determine whether the requirements of section 102 (2)(A), (C) and (E)\* of the National Environmental Policy Act and Part 51\*\* of this chapter have been complied with in the proceeding;

(ii) Independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; and

(iii) Determine whether the construction permit should be issued, denied, or appropriately conditioned to protect environmental values.

(c) In the case of an application for an operating license in which a hearing will be held, the notice of hearing will, except as provided in paragraph (d) of this section and unless the Commission determines otherwise, state, in implementation of paragraph (a)(3) of this section, that the presiding officer will consider any matters in controversy among the parties and may, where he or she determines that a serious safety, environmental, or common defense and security matter has not been raised by the parties, consider such other matter within the purview of:

(1) Whether there is reasonable assurance that construction of the facility will be substantially completed on a timely basis, in conformity with the construction permit and the application as amended, the provisions of the Act, and the regulations in this chapter;

(2) Whether the facility will operate in conformity with the application as amended, the provisions of the Act, and the regulations in this chapter;

(3) Whether there is reasonable assurance (i) that the activities to be authorized by the operating license can be conducted without endangering the health and safety of the public and (ii)

that such activities will be conducted in compliance with the regulations in this chapter;

(4) Whether the applicant is technically and financially qualified to engage in the activities to be authorized by the operating license in accordance with the regulations in this chapter;

(5) Whether the applicable provisions of Part 140 of this chapter have been satisfied;

(6) Whether issuance of the license will be inimical to the common defense and security or to the health and safety of the public; and

(7) If the application is for an operating license for a nuclear power reactor, a testing facility, or a fuel reprocessing plant, or other facility whose operation has been determined by the Commission to have a significant impact on the environment, whether, in accordance with the requirements of Part 51\*\* of this chapter, the operating license should be issued as proposed.<sup>3</sup>

†(d) In the case of an application for a construction permit or an operating license for a facility on which a hearing is required by the Act or this chapter, or in which the Commission finds that a hearing is required in the public interest, for the consideration of the antitrust aspects of the application, the notice of hearing will, unless the Commission determines otherwise, state, in implementation of paragraph (a) (1) and (3) of this section:

(1) A time of the hearing, which will be as soon as practicable after the receipt of the Attorney General's advice and compliance with sections 105 and 189g of the Act and other provisions of this part;<sup>4</sup>

(2) That the presiding officer will consider the issue of whether or not the activities under the proposed license

\*Issues (1) to (6) are the issues pursuant to the Atomic Energy Act of 1954, as amended. Issue (7) is the issue pursuant to the National Environmental Policy Act of 1969.

<sup>3</sup>As permitted by subsection 105c(8) of the Act with respect to proceedings in which an application for a construction permit was filed prior to Dec. 19, 1970, and proceedings in which a written request for antitrust review of an application for an operating license to be issued under section 104b has been made by a person who intervened or sought by timely written notice to the Commission to intervene in the construction permit proceeding for the facility to obtain a determination of antitrust consideration or to advance a jurisdictional basis for such determination with twenty-five (25)

days after the date of publication in the FEDERAL REGISTER of notice of filing of the application for an operating license or Dec. 19, 1970 whichever is later, the Commission may issue a construction permit or operating license in advance of consideration of and findings with respect to the antitrust aspects of the application. *Provided*: That the permit or license so issued contains the conditions specified in § 50.55b of this chapter.

†Redesignated 37 FR 15127.

\*\*Amended 39 FR 26279.

\*Amended 43 FR 7209.

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would create or maintain a situation inconsistent with the antitrust laws as specified in section 105a of the Act; and

(3) That matters of radiological health and safety and common defense and security, and matters raised under the National Environmental Policy Act of 1969, will be considered at another hearing for which a notice will be published pursuant to paragraphs (a) and (b) of this section, unless otherwise authorized by the Commission.

(e) The Secretary will give timely notice of the hearing to all parties and to other persons, if any, entitled by law to notice. The Secretary\* will transmit a notice of hearing on an application for a facility license or for a license for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee, to the Governor or other appropriate official of the State and to the chief executive of the municipality in which the facility is to be located or the activity is to be conducted or, if the facility is not to be located or the activity conducted within a municipality, to the chief executive of the county.

### § 2.105 Notice of proposed action.

(a) If a hearing is not required by the Act or this Chapter, and if the Commission has not found that a hearing is in the public interest, it will, prior to acting thereon, cause to be published in the FEDERAL REGISTER a notice of proposed action with respect to an application for:

- (1) A license for a facility;
- (2) A license for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee;
- (3) An amendment of a license specified in paragraph (a) (1) or (2) of this section and which involves a significant hazards consideration; or

(4) Any other license or amendment as to which the Commission determines that an opportunity for a public hearing should be afforded.

In the case of an application for an operating license for a facility of a type described in § 50.21(b) or § 50.22 of this chapter or a testing facility, a notice of opportunity for hearing shall be issued as soon as practicable after the application has been docketed.

(b) The notice of proposed action will  $\Phi$  set forth

- (1) The nature of the action proposed;
- (2) The manner in which a copy of the safety analysis\*\* and of the ACRS report, if any, may be obtained or examined.\*\*\*

(c) If an application for a license is complete enough to permit all evaluations, other than completion inspection, necessary for the issuance of a construction permit and operating license, the notice of proposed issuance of a construction permit may provide that on completion of construction and inspection the operating license will be issued without further prior notice.

(d) The notice of proposed action will provide that, within thirty (30) days from the date of publication of the notice in the FEDERAL REGISTER, or such lesser period authorized by law as the Commission may specify:

- (1) The applicant may file a request for a hearing; and
- (2) Any person whose interest may be affected by the proceeding may file a petition for leave to intervene.

(e) If no request for a hearing or petition for leave to intervene is filed within the time prescribed in the notice, the Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, will issue the license, inform the appropriate State and local officials, and cause to be published in the FEDERAL REGISTER a notice of issuance of the license.

If a request for a hearing and/or a petition for leave to intervene is filed within the time prescribed in the notice, the Commission or an atomic safety and licensing board designated by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel will rule on the request and/or petition and the Secretary or the designated atomic safety and licensing board will issue a notice of hearing or an appropriate order.

(f) Applications for facility licenses under section 103 of the Act and for facility operating licenses under section 104b of the Act as to which any person intervened or sought by timely written notice to the Commission to intervene in

the construction permit proceeding to obtain a determination of antitrust considerations or to advance a predilectional basis for such determination are also subject to the provisions of §§ 2.101(b) and 2.102(d).

### § 2.106 Notice of issuance.

(a) The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, will cause to be published in the FEDERAL REGISTER notice of, and will inform the State and local officials specified in § 2.104(e) of the issuance of:

- (1) A license or an amendment of a license for which a notice of proposed action has been previously published; and
- (2) An amendment of a license for a facility of the type described in § 50.21(b) or § 50.22 of this chapter, or a testing facility, whether or not a notice of proposed action has been previously published.

(b) The notice of issuance will set forth:

- (1) The nature of the license or amendment;
- (2) The manner in which copies of the safety analysis, if any, may be obtained and examined; and
- (3) A finding that the application for the license or amendment complies with the requirements of the Act and this chapter.

### § 2.107 Withdrawal of application.

(a) The Commission may permit an applicant to withdraw an application prior to the issuance of a notice of hearing on such terms and conditions as it may prescribe, or may, on receiving a request for withdrawal of an application, deny the application or dismiss it with prejudice. Withdrawal of an application after the issuance of a notice of hearing shall be on such terms as the presiding officer may prescribe.

(b) The withdrawal of an application does not authorize the removal of any document from the files of the Commission.

(c) The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, will cause to be published in the FEDERAL REGISTER a notice of the withdrawal of an application if notice of receipt of the application has been previously published.

### § 2.108 Denial of application for failure to supply information.

\*\* Amended 31 FR 12774.

\*\*\* Amended 36 FR 4686.

† Deleted 34 FR 9702.

$\Phi$  Amended 78 FR 10151.

\* Amended 39 FR 17972.

† Redesignated 37 FR 15127.



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of Inspection and Enforcement, as appropriate, institute a proceeding pursuant to § 2.202 to modify, suspend or revoke a license, or for such other action as may be proper. Such a request shall be addressed to the Director of Nuclear Reactor Regulation, Director of Nuclear Material Safety and Safeguards, Director, Office of Inspection and Enforcement, as appropriate, and shall be filed either (1) by delivery to the Public Document Room at 1717 H Street NW, Washington, D.C., or (2) by mail or telegram addressed to the Director of Nuclear Reactor Regulation, Director of Nuclear Material Safety and Safeguards, Director, Office of Inspection and Enforcement, as appropriate, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. The requests shall specify the action requested and set forth the facts that constitute the basis for the request.

(b) Within a reasonable time after a request pursuant to paragraph (a) of this section has been received, the Director of Nuclear Reactor Regulation, Director of Nuclear Material Safety and Safeguards, Director, Office of Inspection and Enforcement, as appropriate, shall either institute the requested proceeding or, in accordance with this subpart (a) shall advise the person who made the request in writing that no proceeding will be instituted in whole or in part with respect to his request, and the reasons therefor.

(c)(1) Director's decisions under this section will be filed with the Office of the Secretary. Within twenty-five (25) days after the date of the Director's decision under this section that no proceeding will be instituted or other action taken in whole or in part, the Commission may on its own motion review that decision, in whole or in part, to determine if the Director has abused his discretion. This review power does not limit in any way either the Commission's supervisory power over delegated staff actions or the Commission's power to consult with the staff on a formal or informal basis regarding institution of proceedings under this section.

(2) No petition or other request for Commission review of a Director's decision under this section will be entertained by the Commission.

Subpart C (Deleted 40 FR 8774.)

Subpart D—Additional Procedures Applicable to Proceedings for the Issuance of Licenses To Construct or Operate Nuclear Power Plants of Duplicate Design at Multiple Sites

### § 2.400 Scope of subpart.

This subpart describes procedures applicable to licensing proceedings which involve the consideration in hearings of a number of applications, filed by one or more applicants pursuant to Appendix N of Part 50 of this chapter, for licenses to construct and operate nuclear power reactors of essentially the same design to be located at different sites.

### § 2.401 Notice of hearing on applications pursuant to Appendix N of Part 50 for construction permits.

(a) In the case of applications pursuant to Appendix N of Part 50 of this chapter for construction permits for nuclear power reactors of the type described in § 50.22 of this chapter, the Secretary will issue notices of hearing pursuant to § 2.104.

(b) The notice of hearing will also state the time and place of the hearings on any separate phase of the proceeding.

### § 2.402 Separate hearings on separate issues; consolidation of proceedings.

(a) In the case of applications pursuant to Appendix N of Part 50 of this chapter for construction permits for nuclear power reactors of a type described in § 50.22 of this chapter, the Commission or the presiding officer may order separate hearings on particular phases of the proceeding, such as matters related to the acceptability of the design of the reactor, in the context of the site parameters postulated for the design, environmental matters, or antitrust aspects of the application.

(b) If a separate hearing is held on a particular phase of the proceeding, the Commission or presiding officers of each affected proceeding may, pursuant to § 2.716, consolidate for hearing on that phase two or more proceedings to consider common issues relating to the applications involved in the proceedings, if it finds that such action will be conducive to the proper dispatch of its business and to the ends of justice. In fixing the place of any such consolidated hearing due regard will be given to the convenience and necessity of the parties, petitioners for leave to intervene or the attorneys or representatives of such persons, and the public interest.

### § 2.403 Notice of proposed action on applications for operating licenses pursuant to Appendix N of Part 50.

In the case of applications pursuant to Appendix N of Part 50 of this chapter for operating licenses for nuclear power

reactors, if the Commission has not found that a hearing is in the public interest, the Director of Nuclear Reactor Regulation will, prior to acting thereon, cause to be published in the *FEDERAL REGISTER*, pursuant to § 2.105, a notice of proposed action with respect to each application as soon as practicable after the applications have been docketed.

### § 2.404 Hearings on applications for operating licenses pursuant to Appendix N of Part 50.

If a request for a hearing and/or petition for leave to intervene is filed within the time prescribed in the notice of proposed action on an application for an operating license pursuant to Appendix N of Part 50 of this chapter with respect to a specific reactor(s) at a specific site and the Commission or an atomic safety and licensing board designated by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel has issued a notice of hearing or other appropriate order, the Commission or the atomic safety and licensing board may order separate hearings on particular phases of the proceeding and/or consolidate for hearing two or more proceedings in the manner described in § 2.402.

### § 2.405 Initial decisions in consolidated hearings.

At the conclusion of any hearing held pursuant to this subpart, the presiding officer will render a partial initial decision which may be appealed pursuant to § 2.762. No construction permit or full power operating license will be issued until an initial decision has been issued on all phases of the hearing and all issues under the Act and the National Environmental Policy Act of 1969 appropriate to the proceeding have been resolved.

### § 2.406 Finality of decisions on separate issues.

Notwithstanding any other provision of this chapter, in a proceeding conducted pursuant to this subpart and Appendix N of Part 50 of this chapter, no matter which has been reserved for consideration in one phase of the hearing shall be considered at another phase of the hearing except on the basis of significant new information that substantially affects the conclusion(s) reached at the other phase or other good cause.

### § 2.407 Applicability of other sections.

The provisions of Subparts A and G relating to construction permits and operating licenses apply, respectively, to construction permits and operating licenses subject to this subpart, except as

\*Amended 43 FR 17798.

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qualified by the provisions of this subpart.

**Subpart E—Additional Procedures Applicable to Proceedings for the Issuance of Licenses To Manufacture Nuclear Power Reactors To Be Operated at Sites Not Identified in the License Application and Related Licensing Proceedings**

30 FR 30261

### § 2.500 Scope of subpart.

This subpart prescribes procedures applicable to licensing proceedings which involve the consideration in separate hearings of an application for a

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### § 2.752 Prehearing conference.

(a) The Commission or the presiding officer may, and in the case of a proceeding on an application for a construction permit or an operating license for a facility of a type described in §§ 50.21(b) or 50.22 of this chapter or a testing facility, shall direct the parties or their counsel to appear at a specified time and place for a conference to consider:

(1) Simplification, clarification, and specification of the issues;

(2) The necessity or desirability of amending the pleadings;

(3) The obtaining of stipulations and admissions of fact and of the contents and authenticity of documents to avoid unnecessary proof;

(4) Identification of witnesses and the limitation of the number of expert witnesses, and other steps to expedite the presentation of evidence;

(5) The setting of a hearing schedule; and

(6) Such other matters as may aid in the orderly disposition of the proceeding. A prehearing conference held under this section in a proceeding involving a construction permit or operating license shall be held within sixty (60) days after discovery has been completed,<sup>8</sup> or such other time as the Commission or the presiding officer may specify.

(b) Prehearing conferences may be stenographically reported.

(c) The presiding officer shall enter an order which recites the action taken at the conference, the amendments allowed to the pleadings and agreements by the parties, and which limits the issues or defines the matters in controversy to be determined in the proceeding. Objections to the order may be filed by a party within five (5) days after service of the order, except that the regulatory staff may file objections to such order within ten (10) days after service. The board may revise the order in the light of the objections presented and, as permitted by § 2.718(i) may certify for determination to the Commission or the appeal board, as appropriate, such matters raised in the objections as it deems appropriate. The order shall control the subsequent course

of the proceeding unless modified for good cause.

### § 2.753 Stipulations.

Apart from any stipulations made during or as a result of a prehearing conference, the parties may stipulate in writing at any stage of the proceeding or orally during the hearing, any relevant fact or the contents or authenticity of any document. Such a stipulation may be received in evidence. The parties may also stipulate as to the procedure to be followed in the proceeding. Such stipulations may, on motion of all parties, be recognized by the presiding officer to govern the conduct of the proceeding.

### § 2.754 Proposed findings and conclusions.

(a) Any party to a proceeding may, or if so directed by the presiding officer shall, file proposed findings of fact and conclusions of law, briefs and a proposed form or order or decision within the time provided by the following subparagraphs, except as otherwise ordered by the presiding officer:

(1) The party who has the burden of proof shall, within twenty (20) days after the record is closed, file proposed findings of fact and conclusions of law and briefs, and a proposed form of order or decision.

(2) Other parties may file proposed findings, conclusions of law and briefs within thirty (30) days after the record is closed. However, the staff may file such proposed findings, conclusions of law and briefs within forty (40) days after the record is closed.

(3) A party who has the burden of proof may reply within ten (10) days after service of proposed findings and conclusions of law and briefs by other parties.

(b) Failure to file proposed findings of fact, conclusions of law or briefs when directed to do so may be deemed a default, and an order or initial decision may be entered accordingly.

(c) Proposed findings of fact shall be clearly and concisely set forth in numbered paragraphs and shall be confined to the material issues of fact presented on the record, with exact citations to the transcript of record and exhibits in support of each proposed finding. Proposed conclusions of law shall be set forth in numbered paragraphs as to all material issues of law or discretion presented on the record. Proposed findings of fact and conclusions of law submitted by a person

who does not have the burden of proof and who has only a limited interest in the proceeding may be confined to matters which affect his interests.

### § 2.755 Oral argument before presiding officer.

When, in the opinion of the presiding officer, time permits and the nature of the proceeding and the public interest warrant, he may allow and fix a time for the presentation of oral argument. He will impose appropriate limits of time on the argument. The transcript of the argument shall be a part of the record.

### § 2.756 Informal procedures.

The Commission encourages the use of informal procedures consistent with the Act, sections 551-558 of title 5 of the United States Code, and the regulations in this chapter, and with the orderly conduct of the proceeding and the necessity for preserving a suitable record for review.

### § 2.757 Authority of presiding officer to regulate procedure in a hearing.

To prevent unnecessary delays or an unnecessarily large record, the presiding officer may:

(a) Limit the number of witnesses whose testimony may be cumulative;

(b) Strike argumentative, repetitious, cumulative, or irrelevant evidence;

(c) Take necessary and proper measures to prevent argumentative, repetitious, or cumulative cross-examination; and

(d) Impose such time limitations on arguments as he determines appropriate, having regard for the volume of the evidence and the importance and complexity of the issues involved.

### § 2.758 Consideration of Commission rules and regulations in adjudicatory proceedings.

(a) Except as provided in paragraphs (b), (c), and (d) of this section, any rule or regulation of the Commission, or any provision thereof, issued in its program for the licensing and regulation of production and utilization facilities, source material, special nuclear material or byproduct material, shall not be subject to attack by way of discovery, proof, argument, or other means in any adjudicatory proceeding involving initial licensing subject to this subpart, other than a pending proceeding wherein a party has attacked such rule or regulation, and the presiding officer, the Atomic Safety and Licensing Appeal Board or the

<sup>8</sup> Discovery, as used in this section, does not include the production of the ACRS report, the safety evaluation prepared by the regulatory staff, or any detailed statement on environmental considerations prepared by the Director of Regulation or his designee in the proceeding pursuant to Appendix D of Part 50 of this chapter.

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Commission has ruled thereon before August 27, 1972.\*\*

(b) A party to an adjudicatory proceeding involving initial licensing subject to this subpart may petition that the application of a specified Commission rule or regulation or any provision thereof, of the type described in paragraph (a) of this section, be waived or an exception made for the particular proceeding. The sole ground for a petition for waiver or exception shall be that special circumstances with respect to the subject matter of the particular proceeding are such that application of the rule or regulation (or provision thereof) would not serve the purposes for which the rule or regulation was adopted. The petition shall be accompanied by an affidavit that identifies the specific aspect or aspects of the subject matter of the proceeding as to which application of the rule or regulation (or provision thereof) would not serve the purposes for which the rule or regulation was adopted, and shall set forth with particularity the special circumstances alleged to justify the waiver or exception requested. Any other party may file a response thereto, by counter-affidavit or otherwise.

(c) If, on the basis of the petition, affidavit and any response thereto provided for in paragraph (b) of this section, the presiding officer determines that the petitioning party has not made a prima facie showing that the application of the specific Commission rule or regulation or provisions thereof to a particular aspect or aspects of the subject matter of the proceeding would not serve the purposes for which the rule or regulation was adopted and that application of the rule or regulation should be waived or an exception granted, no evidence may be received on that matter and no discovery, cross-examination or argument directed to the matter will be permitted, and the presiding officer may not further consider the matter.

(d) If, on the basis of the petition, affidavit and any response provided for in paragraph (b) of this section, the presiding officer determines that such a prima facie showing has been made, the presiding officer shall, before ruling thereon, certify directly to the Commission<sup>9</sup> for determination the matter of whether the application of the Commission rule or regulation or provision thereof to a particular aspect or aspects of the subject matter of the proceeding, in the context of this section, should be waived or an exception made. The Commission may, among

other things, on the basis of the petition, affidavits, and any response, determine whether the application of the specified rule or regulation (or provision thereof) should be waived or an exception be made, or the Commission may direct such further proceedings as it deems appropriate to aid its determination.

(e) Whether or not the procedure in paragraph (b) of this section is available, a party to an initial licensing proceeding may file a petition for rule making pursuant to § 2.802.

### § 2.759 Settlement in initial licensing proceedings.

The Commission recognizes that the public interest may be served through settlement of particular issues in a proceeding or the entire proceeding. Therefore, to the extent that it is not inconsistent with hearing requirements in section 189 of the Act (42 U.S.C. 2239), the fair and reasonable settlement of contested initial licensing proceedings is encouraged. It is expected that the presiding officer and all of the parties to those proceedings will take appropriate steps to carry out this purpose.

### INITIAL DECISION AND COMMISSION REVIEW

### § 2.760 Initial decision and its effect.

(a) After hearing, the presiding officer will render an initial decision which will constitute the final action of the Commission forty-five (45) days after its date when it authorizes the issuance or amendment of a license or limited work authorization<sup>8</sup> for a facility, or thirty (30) days after its date in any other case, unless exceptions are taken in accordance with section 2.762 or the Commission directs that the record be certified to it for final decision.

(b) Where the public interest so requires, the Commission may direct that the presiding officer certify the record to it without an initial decision, and may:

- (1) Prepare its own initial decision, which will become final unless exceptions are filed; or
- (2) Omit an initial decision on a finding that due and timely execution of its functions imperatively and unavoidably so requires.

(c) An initial decision will be in writing and will be based on the whole record and supported by reliable, probative, and substantial evidence. The

<sup>9</sup>The matter will be certified to the Commission notwithstanding the provisions of § 2.785.

<sup>8</sup>Amended 43 FR 17798.

initial decision will include:

(1) Findings, conclusions and rulings, with the reasons or basis for them, on all material issues of fact, law, or discretion presented on the record;

(2) All facts officially noticed and relied on in making the decision;

(3) The appropriate ruling, order or denial of relief with the effective date;

(4) The time within which exceptions to the decision and a brief in support of them may be filed, the time within which briefs in support of or in opposition to exceptions filed by another party may be filed and, in the case of an initial decision which may become final in accordance with paragraph (a) of this section the date when it may become final.

### § 2.760a Initial decisions in contested proceedings on applications for facility operating licenses.

In any initial decision in a contested proceeding on an application for an operating license for a production or utilization facility, the presiding officer shall make findings of fact and conclusions of law on the matters put into controversy by the parties to the proceeding and on matters which have been determined to be the issues in the proceeding by the Commission or the presiding officer. Matters not put into controversy by the parties will be examined and decided by the presiding officer only where he or she determines that a serious safety, environmental, or common defense and security matter exists. Depending on the resolution of those matters, the Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, after making the requisite findings, will issue, deny, or appropriately condition the license.

### § 2.761 Expedited decisional procedure.

(a) The presiding officer may determine a proceeding by an order after the conclusion of a hearing without issuing an initial decision, when:

(1) All parties stipulate that the initial decision may be omitted and waive their rights to file exceptions, to request oral argument, and to seek judicial review;

(2) No unresolved substantial issue of fact, law, or discretion remains, and the record clearly warrants granting the relief requested; and

(3) The presiding officer finds that dispensing with the issuance of the initial decision is in the public interest.

\*\*Effective date of these amendments

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(b) An order entered pursuant to paragraph (a) of this section shall be subject to review by the Commission on its own motion within thirty (30) days after its date.

(c) An initial decision may be made effective immediately, subject to review by the Commission on its own motion within thirty (30) days after its date, \*\* except as otherwise provided in this chapter when:

(1) All parties stipulate that the initial decision may be made effective immediately and waive their rights to file exceptions, to request oral argument, and to seek judicial review;

(2) No unresolved substantial issue of fact, law, or discretion remains and the record clearly warrants granting the relief requested; and

(3) The presiding officer finds that it is in the public interest to make the initial decision effective immediately.

(d) The provisions of this section do not apply to an initial decision directing the issuance or amendment of a construction permit or construction authorization, or the issuance of an operating license or provisional operating authorization.

### § 2.761a Separate hearings and decisions.

In a proceeding on an application for a construction permit for a utilization facility which is subject to § 51.5(a) of this chapter, and is of the type specified in § 50.21(b) (2) or (3) or 50.22 of this chapter or is a testing facility,† the presiding officer shall unless the parties agree otherwise or the rights of any party would be prejudiced thereby, commence a hearing on issues covered by §§ 50.10(e)(2)(ii) and Part 3. of this chapter as soon as practicable after issuance by the staff of its final environmental impact statement but no later than thirty (30) days after issuance of such statement, and complete such a hearing and issue an initial decision on such matters. Prehearing procedures regarding issues covered by Part 51\* and § 50.10(e)(2)(ii) of this chapter, including any discovery and special prehearing conferences and prehearing conferences as provided in §§ 2.740, 2.740a, 2.740b, 2.741, 2.742, 2.751a, and 2.752, shall be scheduled accordingly. The provisions of §§ 2.754, 2.755, 2.760, 2.762, 2.763, and 2.764(a) shall apply to any proceeding conducted and any initial decision rendered in accordance with this section. Paragraph 2.764(b) shall not apply to any partial initial

\*Amended 39 FR 26279.

\*\*Added 28 FR 10151.

†Amended 42 FR 22882.

‡Amended 43 FR 17798.

decision rendered in accordance with this section. This section shall not preclude separate hearings and decisions on other particular issues.

### § 2.762 Appeals to the Commission from initial decisions.

(a) Within ten (10)± days after service of an initial decision, any party may take an appeal to the Commission by the filing of exceptions to that decision or designated portions thereof. Each exception shall be separately numbered and shall (1) state concisely, without supporting argumentation, the single error of fact or law which is being asserted in that exception; and (2) identify with particularity the portion of the decision (or earlier order or ruling) to which the exception is addressed. A brief in support of the exceptions shall be filed within thirty (30)± days thereafter (forty (40)± days in the case of the staff). The brief shall be confined to a consideration of the exceptions previously filed by the party and, with respect to each exception, shall specify, inter alia, the precise portion of the record relied upon in support of the assertion of error.

(b) Within thirty (30)± days of the filing and service of the brief of the appellant (forty (40)± days in the case of the staff), any other party may file a brief in support of, or in opposition to, the exceptions. Each factual assertion made in such supporting or opposing brief shall be supported by a reference to the precise portion of the record upon which it is based.

(c) A brief in excess of ten (10) pages shall contain a table of contents, with page references, and a table of cases (alphabetically arranged), statutes, regulations, and other authorities cited, with references to the pages of the brief where they are cited.

(d) All documents filed under this section shall be accompanied by a certificate reflecting service upon all other parties to the proceeding.

(e) Any exception or brief which in form or content is not in substantial compliance with the provisions of this section may be stricken, either on motion of a party or by the Commission on its own initiative.

### § 2.763 Oral argument.

In its discretion the Commission may allow oral argument upon the request of a party made in his exceptions or brief, or upon its own initiative.

### § 2.764 Immediate effectiveness of initial decision directing issuance or amendment of construction permit or operating license.<sup>1</sup>

(a) Except as provided in paragraph (c) of this section, an initial decision

directing the issuance or amendment of a construction permit, a construction authorization, or an operating license shall be effective immediately upon issuance unless the presiding officer finds that good cause has been shown by a party why the initial decision should not become immediately effective, subject to the review thereof and further decision by the Commission upon exceptions filed by any party pursuant to § 2.762 or upon its own motion.

(b) Except as provided in paragraph (c) of this section, the Director of Nuclear Reactor Regulation or

Director of Nuclear Material Safety and Safeguards, as appropriate, notwithstanding the filing of exceptions, shall issue a construction permit, a construction authorization, or an operating license, or amendments thereto, authorized by an initial decision, within ten (10) days from the date of issuance of the decision.

(c) An initial decision directing the issuance of an initial license for the construction and operation of an independent spent fuel storage installation (ISFSI) under 10 CFR Part 72 of this chapter shall not become effective until review by the Commission has been completed. The Director of Nuclear Material Safety and Safeguards shall not issue an initial license for the construction and operation of an independent spent fuel storage installation (ISFSI) under 10 CFR Part 72 of this chapter until expressly authorized to do by the Commission.

### FINAL DECISION

### § 2.770 Final decision.

(a) The Commission will ordinarily consider the whole record on review, but may limit the issues to be reviewed and consider only findings and conclusions to which exceptions have been filed.

(b) The Commission may adopt, modify, or set aside the findings, conclusions and order in the initial decision, and will state the basis of its action. The final decision will be in writing and will include:

(1) A statement of findings and conclusions, with the basis for them on all material issues of fact, law or discretion presented;

<sup>1</sup> The temporary suspension of § 2.764 (a) and (b) in certain proceedings and related matters is addressed in Appendix B to this part.



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### EX PARTE COMMUNICATIONS

- (2) All facts officially noticed;  
(3) The ruling on each material exception;

- (4) The appropriate ruling, order, or denial of relief, with the effective date.

#### § 2.771 Petition for reconsideration.

(a) A petition for reconsideration of a final decision may be filed by a party within ten (10) days after the date of the decision. No petition may be filed with respect to an initial decision which has become final through failure to file exceptions thereto.

(b) The petition for reconsideration shall state specifically the respects in which the final decision is claimed to be erroneous, the grounds of the petition, and the relief sought. Within ten (10)\* days after a petition for reconsideration has been filed, any other party may file an answer in opposition to or in support of the petition. However, the staff may file such an answer within twelve (12) days after a petition for reconsideration has been filed.

(c) Neither the filing nor the granting of the petition shall stay the decision unless the Commission orders otherwise.

#### § 2.772 Authority of the Secretary to Rule on Procedural Matters.

When briefs, motions or other papers listed herein are submitted to the Commission itself, as opposed to officers who have been delegated authority to act for the Commission, the Secretary or the Assistant Secretary are authorized to:

(a) Prescribe schedules for the filing of briefs, motions, or other pleadings, where such schedules may differ from those elsewhere prescribed in these rules or where these rules do not prescribe a schedule;

(b) Rule on motions for extensions of time;

(c) Reject motions, briefs, pleadings, and other documents filed with the Commission later than the time prescribed by the Secretary or the Assistant Secretary or established by an order, rule, or regulation of the Commission unless good cause is shown for the late filing;

(d) Prescribe all procedural arrangements relating to any oral argument to be held before the Commission;

(e) Extend the time for the Commission to rule on a petition for review under 10 CFR 2.786(b); (f) Extend the time for the Commission to grant review on its own motion under 10 CFR 2.786(a); and (g) Extend time for Commission review on its own motion of a Director's denial under 10 CFR 2.206(c).

#### § 2.780 Ex parte communications.

(a) Except as provided in paragraph (e) of this section, neither (1) Commissioners, members of their immediate staffs, or other NRC officials and employees who advise the Commissioners in the exercise of their quasi-judicial functions will request or entertain off the record except from each other, nor (2) any party to a proceeding for the issuance, denial, amendment, transfer, renewal, modification, suspension, or revocation of a license or permit, or any officer employee, representative, or any other person directly or indirectly acting in behalf thereof, shall submit off the record to Commissioners or such staff members, officials, and employees, any evidence, explanation, analysis, or advice, whether written or oral, regarding any substantive matter at issue in a proceeding on the record then pending before the NRC for the issuance, denial, amendment, transfer, renewal, modification, suspension, or revocation of a license or permit. For the purposes of this section, the term "proceeding on the record then pending before the NRC" shall include any application or matter which has been noticed for hearing or concerning which a hearing has been requested pursuant to this part.

(b) Copies of written communications covered by paragraph (a) of this section shall be placed in the NRC public document room and served by the Secretary on the communicator and the parties to the proceeding involved.

(c) A Commissioner, member of his immediate staff, or other NRC official or employee advising the Commissioner in the exercise of their quasi-judicial functions, to whom is attempted any oral communication concerning any substantive matter at issue in a proceeding on the record as described in paragraph (a) of this section, will decline to listen to such communication and will explain that the matter is pending for determination. If unsuccessful in preventing such communication, the recipient thereof will advise the communicator that a written summary of the conversation will be delivered to the NRC public document room and a copy served by the Secretary of the Commission on the communicator and the parties to the proceeding involved. The recipient of the oral communication thereupon will make a fair, written summary of such communication and deliver such summary to the NRC public document room and serve copies thereof upon the communicator and the parties to

the proceeding involved.

(d) This section does not apply to communications authorized by paragraph (e) of this section, to the disposition of ex parte matters authorized by law, or to communications requested by the Commission concerning:

- (1) Its proprietary functions;
- (2) General health and safety problems and responsibilities of the Commission; or
- (3) The status of proceedings.

(e) In any adjudication for the determination of an application for initial licensing, other than a contested proceeding, Commissioners, members of their immediate staffs and other NRC officials and employees who advise the Commissioners in the exercise of their quasi-judicial functions may consult the staff, and the staff may communicate with Commissioners, members of their immediate staffs and other NRC officials and employees who advise the Commissioners in the exercise of their quasi-judicial functions.

(f) The provisions and limitations of this section applicable to Commissioners, members of their immediate staffs, and other NRC officials and employees who advise the Commissioners in the exercise of their quasi-judicial functions are applicable to members of the Atomic Safety and Licensing Appeal Board, members of their immediate staffs, and other NRC officials and employees who advise members of the Appeal Board in the exercise of their quasi-judicial functions.

NOTE: [Deleted 40 FR 2975.]

### ATOMIC SAFETY AND LICENSING APPEAL BOARD

#### § 2.785 Functions of Atomic Safety and Licensing Appeal Boards.

(a) The Commission has authorized Atomic Safety and Licensing Appeal Boards to exercise the authority and perform the review functions which would otherwise have been exercised and performed by the Commission, including, but not limited to, those under §§ 2.760-2.771, 2.912, and 2.913 in (1) proceedings on applications for licenses under Part 50 of this chapter and (2) such other licensing proceedings under the regulations in this chapter as the Commission may specify.

\*Amended 43 FR 17798.

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34 FR 13360  
42 FR 22128  
\*\* (b)(1) In the proceedings described in paragraph (a) of this section, the Atomic Safety and Licensing Appeal Board will also exercise the authority and perform the functions which would otherwise have been exercised and performed by the Commission under §§ 2.711, 2.717(a), 2.718(i), 2.720(f), 2.730, 2.742(b), 2.743(b), 2.752 (a) and (c) and Subpart I, except those functions referred to in § 2.905 (c), (e)(2), (g), and (h)(2).\*

42 FR 67088  
(2) In a proceeding on an application for an operating license where the Atomic Safety and Licensing Appeal Board determines that a serious safety, environmental, or common defense and security matter exists that has not been raised by the parties, it may give appropriate consideration to that matter.

(c) In the proceedings described in paragraph (a) of this section, the Atomic Safety and Licensing Appeal Board shall exercise the authority and perform the functions delegated to it subject to the provisions and limitations of the referenced sections and subpart. Except as provided in § 2.786, any action taken by the Atomic Safety and Licensing Appeal Board pursuant to its delegated authority shall have the same force and effect and shall be made, evidenced, and enforced in the same manner as actions of the Commission.

(d) In the proceedings described in paragraph (a) of this section, an Atomic Safety and Licensing Appeal Board may, either in its discretion or on direction of the Commission, certify to the Commission for its determination major or novel questions of policy, law or procedure.

### § 2.786 Review of decisions and actions of an Atomic Safety and Licensing Appeal Board.

45 FR 73465  
(a) Within forty (40) days after the date of a decision or action by an Atomic Safety and Licensing Appeal Board under § 2.785, or within thirty (30) days after a petition for review of such decision or action has been filed under paragraph (b) of this section, the Commission may, in cases of exceptional legal or policy importance, review the decision or action on its own motion.

42 FR 22128  
(b) (1) Within fifteen (15) days after service of a decision or action by an Atomic Safety and Licensing Appeal Board under § 2.785 other than a decision or action on a referral or certification under §§ 2.718(i) or 2.730(f), a party may file a petition for review with the Commission on the ground that the decision or action is erroneous with respect to an important question of fact, law, or

policy.

(2) A petition for review under this paragraph shall be no longer than ten (10) pages, and shall contain the following:

(i) A concise summary of the decision or action of which review is sought;

(ii) A statement (including record citation) where the matters of fact or law raised in the petition for review were previously raised before the Atomic Safety and Licensing Appeal Board and, if they were not, why they could not have been raised;

(iii) A concise statement why in the petitioner's view the decision or action is erroneous; and

(iv) A concise statement why Commission review should be exercised.

(3) Any other party to the proceeding may, within ten (10) days after service of a petition for review, file an answer opposing Commission review. Such an answer shall be no longer than ten (10) pages and should concisely address the matters in paragraph (b) (2) of this section to the extent appropriate. No answer in support of a petition for review or further replies to answers will be entertained by the Commission.

(4) The grant or denial of a petition for review is within the discretion of the Commission, except that:

(i) A petition for review of matters of law or policy will not ordinarily be granted unless it appears the case involves an important matter that could significantly affect the environment, the public health and safety, or the common defense and security, constitutes an important antitrust question, involves an important procedural issue, or otherwise raises important questions of public policy;

(ii) A petition for review of matters of fact will not be granted unless it appears that the Atomic Safety and Licensing Appeal Board has resolved a factual issue necessary for decision in a clearly erroneous manner contrary to the resolution of that same issue by the Atomic Safety and Licensing Board;

(iii) A petition for review will not be granted to the extent that it relies on matters that could have been but were not raised before the Atomic Safety and Licensing Appeal Board. A matter raised sua sponte by an Appeal Board has been raised before the Appeal Board for the purpose of this section; and

(iv) A petition for review will not be granted as to issues raised before the Atomic Safety and Licensing Appeal Board on a pending motion for reconsideration.

(5) If within thirty (30)\*\*\* days after the filing of a petition for review the Commission does not grant the petition, in whole or in part, the petition shall be deemed denied, unless the Commission in its discretion extends the time for its consideration of the petition and any answers thereto.

(6) If a petition for review is granted, the Commission may issue an order specifying the issues to be reviewed and designating the parties to the review proceeding and direct that appropriate

briefs be filed, oral argument be held, or both.

(7) Petitions for reconsideration of Commission decisions upon review, or granting or denying review in whole or in part, will not be entertained.

(8) Neither the filing nor the granting of a petition for review will stay the effect of the decision or action of the Atomic Safety and Licensing Appeal Board, unless otherwise ordered by the Commission.

(9) Except as provided in this section and Section 2.788, no petition or other request for Commission review of a decision or action of an Atomic Safety and Licensing Appeal Board will be entertained.

### § 2.787 Composition of Atomic Safety and Licensing Appeal Boards.

(a) An Atomic Safety and Licensing Appeal Board is composed of three members, possessing qualifications deemed appropriate to the issues to be decided, assigned for each proceeding from the Atomic Safety and Licensing Appeal Panel. Members shall be assigned by the permanent Chairman of the Panel or, in his absence, by the permanent Vice-Chairman. The Chairman of an Appeal Board for a particular proceeding shall be qualified in the conduct of administrative proceedings. An alternate may be assigned to serve as a member of an Atomic Safety and Licensing Appeal Board for a particular proceeding in the event that a member assigned to such proceeding becomes unavailable.

(b) In the absence of a quorum, the following individuals are authorized to act for an Appeal Board on procedural matters, including requests for stays of orders by presiding officers:

(1) The Chairman of the Appeal Board assigned for a particular proceeding;

(2) The permanent Chairman of the Atomic Safety and Licensing Appeal Panel, in the event that the Chairman for a particular proceeding is not available to act upon the matter in question, or has not been assigned;

(3) The permanent Vice-Chairman of the Appeal Panel, in the event that the individuals listed above are not available to act upon the matter in question, or in the event that a Chairman for a particular proceeding has not been assigned, or in the event that the position of permanent Chairman of the Appeal Panel is vacant.

Except with respect to requests for stays of orders of presiding officers, action by a designated individual under the authority of this paragraph shall be reviewable by the Appeal Board for the particular proceeding, upon its own mo-

\* Amended 41 FR 53328.

\*\* Redesignated 40 FR 2973.

\*\*\* Amended 45 FR 45890

## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

tion or upon a motion filed within three (3) days of the date of the particular action in accordance with § 2.730. Action under this authority with respect to requests for stays of orders of presiding officers shall be reviewable by the Commission, upon its own motion or upon a motion filed within three (3) days of the date of the particular action in accordance with § 2.730.

### § 2.788 Stays of decisions of presiding officers and Atomic Safety and Licensing Appeal boards pending review.

(a) Within ten (10)\* days after service of a decision or action any party to the proceeding may file an application for a stay of the effectiveness of the decision or action pending filing of and a decision on an appeal or petition for review. Except as provided in paragraph (f) of this section, such an application may be filed with the Commission, Atomic Safety and Licensing Appeal Board, or the presiding officer.

(b) An application for a stay shall be no longer than ten (10) pages, exclusive of affidavits, and shall contain the following:

(1) A concise summary of the decision or action which is requested to be stayed;

(2) A concise statement of the grounds for stay, with reference to the factors specified in paragraph (e) of this section;

(3) In the case of an application to the Commission for stay of decisions or actions by an Atomic Safety and Licensing Appeal Board, a statement where (including record citation, if available) a stay was requested from the Appeal Board and denied. If no such request was made of the Appeal Board, the application should state why it could not have been made; and

(4) To the extent that an application for a stay relies on facts subject to dispute, appropriate references to the record or affidavits by knowledgeable persons.

(c) Service of an application for a stay on the other parties shall be by the same method, e.g. telegram, mail, as the method for filing the application with the Commission, Atomic Safety and Licensing Appeal Board, or the presiding officer.

(d) Within ten (10)\* days after service of an application for a stay under this section, any party may file an answer

supporting or opposing the granting of a stay. Such answer shall be no longer than ten (10) pages, exclusive of affidavits, and should concisely address the matters in paragraph (b) of this section to the extent appropriate. No further replies to answers will be entertained. Filing of and service of an answer on the other parties shall be by the same method, e.g. telegram, mail, as the method for filing the application for the stay.

(e) In determining whether to grant or deny an application for a stay, the Commission, Atomic Safety and Licensing Appeal Board, or presiding officer will consider:

(1) Whether the moving party has made a strong showing that it is likely to prevail on the merits;

(2) Whether the party will be irreparably injured unless a stay is granted;

(3) Whether the granting of a stay would harm other parties; and

(4) Where the public interest lies.

(f) An application to the Commission for a stay of a decision or action by an Atomic Safety and Licensing Appeal Board will be denied if a stay was not, but could have been, sought before the Appeal Board. An application for a stay of a decision or action of a presiding officer may be filed before either the Atomic Safety and Licensing Appeal Board or the presiding officer, but not both at the same time.

(g) In extraordinary cases, where prompt application is made under this section, the Commission, Atomic Safety and Licensing Appeal Board, or presiding officer may grant a temporary stay to preserve the status quo without waiting for filing of any answer. The application may be made orally provided the application is promptly confirmed by telegram. Any party applying under this paragraph shall make all reasonable efforts to inform the other parties of the application, orally if made orally.

(h) A party may file an application for a stay of a decision or action granting or denying a stay. As to a decision or action of a presiding officer the application shall be filed with the Atomic Safety and Licensing Appeal Board. As to a decision or action of the Atomic Safety and Licensing Appeal Board the application shall be filed with the Commission. In each case the procedures and criteria of paragraphs 2.788(a)–(e) shall be followed.

### AVAILABILITY OF OFFICIAL RECORDS

#### § 2.790 Public inspections, exemptions, requests for withholding.

(a) Subject to the provisions of paragraphs (b), (d), and (e) of this section, final NRC records and documents,<sup>10</sup> including but not limited to correspondence to and from the NRC regarding the issuance, denial, amendment, transfer, renewal, modification, suspension, revocation, or violation of a license, permit, or order, or regarding a rule making proceeding subject to this part shall not, in the absence of a compelling reason for non-disclosure after a balancing of the interests of the person or agency urging nondisclosure and the public interest in disclosure, be exempt from disclosure and will be made available for inspection and copying in the NRC Public Document Room, except for matters that are:

(1)(i) Specifically authorized under criteria established by an Executive order to be kept secret in the interest of national defense or foreign policy and (ii) are in fact properly classified pursuant to such Executive order;

(2) Related solely to the internal personnel rules and practices of the Commission;

(3) specifically exempted from disclosure by statute (other than 5 U.S.C. 552(b)), provided that such statute (i) requires that the matters be withheld from the public in such a manner as to leave no discretion on the issue, or (ii) establishes particular criteria for withholding or refers to particular types or matters to be withheld.

(4) Trade secrets and commercial or financial information obtained from a person and privileged or confidential;

(5) Interagency or intraagency memorandums or letters which would not be available by law to a party other than an agency in litigation with the Commission;

(6) Personnel and medical files and similar files, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy;

(7) Investigatory records compiled for law enforcement purposes, but only to the extent that the production of such records would (i) interfere with enforcement proceedings, (ii) deprive a person of a right to a fair trial or an impartial adjudication, (iii) constitute an unwarranted invasion of personal privacy,

<sup>10</sup> Such records and documents do not include handwritten notes and drafts.

\*Amended 43 FR 17798.

## PART 50 • PROPOSED RULE MAKING

refractory material, or do you recommend some other concept? Would you respond differently for different containment types? If so, what differences would you recommend? How do your recommendations affect other safety considerations?

10. Should the NRC require design changes to account for increased radioactive material that may be transported during an accident by systems normally functioning with much lower levels of radioactivity such as the steam and residual heat removal systems and the containment drainage system?

11. Should the NRC require more extensive operator training, strict literal compliance with new and improved detailed operating procedures, increased reliability of emergency cooling or decay heat removal capability, and expanded control room minimum manning as alternatives or supplements to degraded cooling design improvements?

12. Should the NRC require an alternate, add-on, self-contained decay heat removal system to prevent degradation of the core or to cool a degraded core, in contrast to the previously discussed schemes which are aimed toward mitigating the consequences of degraded core cooling? How would such a decay heat removal system affect other safety considerations?

13. Should the NRC require systems such as the makeup and purification systems to be located in a leak-tight building? Would such a requirement add to or detract from overall plant safety?

14. What design, quality and seismic criteria would you recommend for any additional systems to prevent the potential breaching of containment such as systems for controlled filtered venting, hydrogen combustion control, and core retention mentioned in previous questions? Do you favor evaluating designs of such systems on a realistic basis, as opposed to the conservative method used to evaluate engineered safety features? Do you favor establishing design criteria for such systems that are equally stringent, less stringent, or more stringent than those applied to engineered safety features? Please explain your response in terms of criteria you would recommend, including consideration of redundancy, diversity, testability, inspectability, and structural design limits (including seismic requirements).

15. Can probabilistic analysis be used both as an aid in determining and comparing the adequacy and usefulness of the several features mentioned in previous questions and as an aid in determining the design criteria and

reliability requirements for these features? How do you view the utility of quantitative risk analysis in better understanding the safety advantages and disadvantages of the several features mentioned in previous questions?

16. In weighing the costs of design and operational improvements to cope with degraded core cooling against the benefits of their use, what quantitative methods or other guidance would you suggest to facilitate preparation of a useful value-impact assessment? Would you consider useful or appropriate comparisons between nuclear power plant risks and other risks to which people are exposed?

17. What aspects of degraded cooling or melted-core accidents are sufficiently unknown or uncertain as to impede design and analysis of mitigating systems, thus requiring additional research or experimentation?

18. The NRC has under way a separate rulemaking proceeding concerning reactor siting and an emergency planning rule has recently been approved. If you are familiar with these separate activities, how would you modify present and proposed requirements for emergency planning and reactor siting if accidents beyond the present design basis were to be considered in nuclear power plant safety analyses?

45 FR 67099

Published 10/9/80

Comment period expires 11/24/80

### 10 CFR Part 50

#### Plan To Require Licensees and Applicants to Document Deviations From the Standard Review Plan

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of proposed rulemaking.

**SUMMARY:** The Nuclear Regulatory Commission is considering requiring all nuclear power plant licensees and all applicants for construction permits and manufacturing licenses to identify and justify deviations from the acceptance criteria of the applicable revision of the Standard Review Plan, NUREG-75/087. This program will provide the NRC with uniform documentation of the extent to which each plant deviates from current licensing acceptance criteria. Comment is sought on the proposal and on the preferred method of implementing such a proposal.

**DATE:** The comment period expires on November 24, 1980.

**ADDRESSES:** Comments should be submitted in writing to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C., 20555, Attention: Docketing and Service Branch. All comments received will be available for public inspection in the Commission's Public Document Room at 1717 H Street, NW, Washington, D.C.

#### FOR FURTHER INFORMATION CONTACT:

Malcolm L. Ernst, Assistant Director for Technology, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, (301) 492-8016.

**SUPPLEMENTARY INFORMATION:** The Standard Review Plan (SRP), NUREG 75/087, first published in 1975, was prepared for the guidance of NRC staff reviewers in performing safety reviews of applications to construct or operate nuclear power plants. The principal purpose of the SRP is to ensure the quality and uniformity of the staff reviews and to present a well-defined base from which proposed changes in the scope of these reviews may be evaluated. The SRP also serves to make information about regulatory matters widely available, and improves understanding of the staff review process by interested members of the public and the nuclear power industry.

The NRC's current techniques for the safety evaluation of nuclear power facilities as set forth in the SRP, are the result of years of experience. A great deal of progress has been made in the methods of review and in the development of regulatory guides and other staff positions referenced in the SRP.

As this experience acquired over the years is incorporated into the regulatory process, regulatory guides, including the SRP, are periodically reviewed and revised to reflect the current state-of-the-art. This results in a varying scope of review over time and tends to lead to lack of uniform documentation of each plant's conformance with current staff acceptance criteria. Some plants, for instance, have been reviewed against the SRP at the OL stage but not at the CP stage, while still others, although reviewed against the SRP at both the CP and OL stage, lack uniformity because of updating of the SRP after the CP review was completed. This lack of uniform documentation makes it difficult to determine the extent to which plants reviewed some time ago deviate from current acceptance criteria, and if so, the safety significance of such deviations.



## PART 50 • PROPOSED RULE MAKING

As a result of the accident at Three Mile Island, many regulatory requirements have been revised and new requirements have been promulgated. Accordingly, the staff has begun to revise the SRP to reflect these new requirements. This next revision of the Standard Review Plan, scheduled for completion in April 1981, will consist of the May 1980 version of the SRP, modified to reference all applicable safety and safeguards regulations and those Division 1 Regulatory Guides, staff positions, and other documents currently used by the staff to interpret the intent of these regulations, including requirements resulting from the TMI accident.

Requiring license applicants to identify and justify deviations from the acceptance criteria in the applicable revision of the SRP would enhance the quality of the staff's review of applications and assist the staff in making the determinations required by 10 CFR Part 50. In addition, such documentation would more clearly identify the bases for the acceptability of plant designs and their relationship to current licensing criteria. A similar post-licensing requirement for currently operating plants would improve the staff's ability to evaluate the extent and safety significance of deviations from current staff acceptance criteria for these plants.

In a related matter, the NRC is required by Section 110 of Public Law 96-295 (NRC FY 90 Authorization Bill) to develop a plan for the systematic safety review of all operating nuclear power plants. This plan must include among other things: the identification of each current rule and regulation, compliance with which the NRC determines to be of particular significance to the protection of the public health and safety; and the determination of the extent to which each currently operating plant complies with those regulations, including an indication of whether such compliance was achieved by use of Division 1 Regulatory Guides and staff positions and where such compliance was achieved by equivalent means.

In order to carry out the requirements of Pub. L. 96-295, to document deviations from the SRP and to improve the staff's ability to evaluate the safety significance of such deviations, the NRC is considering requiring all nuclear power plant licensees and license applicants to identify and provide the safety bases for deviations from applicable revisions of the SRP. Several methods of implementing this requirement are under consideration. These methods are: issuance of a Regulatory Guide, specification of a construction permit or operating license condition, a Policy Statement, or rulemaking.

Specifically, the NRC is considering imposing the following requirements:

1. All nuclear power plants issued operating licenses on or before June 30, 1980,<sup>1</sup> would be required to identify and justify all deviations from the acceptance criteria of the SRP revision scheduled to be issued in April 1981 that relate to those regulations which the Commission determines to be of particular significance to the protection of the public health and safety.

2. All applicants who are issued a nuclear power plant operating license after June 30, 1980, and for which the NRC staff's Safety Evaluation Report will be issued on or before January 1, 1982<sup>2</sup> would be required to identify and justify, after issuance of an OL, all deviations from the acceptance criteria of the SRP revision scheduled to be issued in April 1981 that relate to those regulations the Commission determines to be of particular significance to the protection of the public health and safety.

3. All applicants for a nuclear power plant operating license for which the NRC staff's Safety Evaluation Report is issued after January 1, 1982, would be required to identify and justify, prior to issuance of the operating license, all deviations from all acceptance criteria of the SRP revision scheduled to be issued in April 1981.

4. All applicants for a nuclear power plant construction permit or manufacturing license for which the NRC staff's Safety Evaluation Report TMI Supplement is issued before January 1, 1982, would be required to identify and justify, prior to issuance of the construction permit or manufacturing license, all deviations from all acceptance criteria of the May 1980 version of the SRP and from the "Proposed Licensing Requirements for Pending Applications for Construction Permits and Manufacturing Licenses," in NUREG-0718, (as modified after public comment).

5. All applicants for a nuclear power plant construction permit or manufacturing license for which the NRC staff's Safety Evaluation Report is issued after January 1, 1982, would be required to identify and justify, prior to issuance of the construction permit or manufacturing license, all deviations from all acceptance criteria of the SRP revision scheduled to be issued in April 1981.

The Commission published a Federal Register Notice on October 2, 1980 (45 FR 65247) inviting comment on Requirements 4 and 5 of the current plan. The present notice reiterates those

requirements and integrates them with the requirements for operating plants and applicants for operating licenses.

The Commission will consider public comments received in response to this notice in determining the appropriate action to be taken, including the possible issuance of final rules on some or all of these matters.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Section 553 of Title 5 of the United States Code, notice is hereby given that amendment of the Commission's regulations in 10 CFR Part 50 with regard to some or all of the subjects and issues described in this notice is contemplated.

➤ 45 FR 75536  
Published 11/14/80  
Comment period expires 1/13/80

### 10 CFR Part 50

#### Domestic Licensing of Production and Utilization Facilities; Fracture Toughness Requirements for Nuclear Power Reactors

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is considering amending its regulations which specify fracture toughness requirements for nuclear power reactors and its requirements for reactor vessel material surveillance programs. The amendments would clarify the applicability of these requirements to old and new plants, modify certain requirements as described below, and shorten and simplify these regulations by more extensively incorporating by reference appropriate National Standards.

**DATES:** Comment period expires January 13, 1981.

**ADDRESSES:** Written comments should be submitted to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch.

**FOR FURTHER INFORMATION CONTACT:** Dr. P. N. Randall, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, 301-443-5997.

<sup>1</sup> The date on which Pub. L. 96-295 became effective.

<sup>2</sup> The basis for the January 1, 1982 date, is to permit adequate time after issuance of the revised SRP for a licensee to document and justify deviations and for the NRC staff to incorporate evaluations of the more safety significant deviations into the staff Safety Evaluation Reports.

<sup>1</sup> The revised SRP (April 1981) has been designed and defined to be equivalent to Division 1 Regulatory Guides and staff positions.



## PART 50 • PROPOSED RULE MAKING

**SUPPLEMENTARY INFORMATION:** When 10 CFR Part 50 was amended by adding Appendix G, "Fracture Toughness Requirements," and Appendix H, "Reactor Vessel Material Surveillance Program Requirements," on July 17, 1973 (38 FR 19012), the ASME Boiler and Pressure Vessel Code (the ASME Code) provisions pertaining to nuclear power plant components were being extensively revised. Some requirements that had not yet become effective in the ASME Code were included in Appendix G. Now that experience has shown that the ASME Code requirements are adequate, Appendix G is being condensed by more extensively incorporating the ASME Code by reference.

Appendix H incorporated by reference the 1973 edition of ASTM E 185.<sup>1</sup> Now there is a new edition, E 185-79. As amended, Appendix H would specify the earliest edition of E 185 that could be used for each part of the surveillance program, and would delete paragraphs that are now covered by specific provisions of E 185-79.

Paragraph 50.55a(i), which makes the provisions of Appendices G and H conditions of a construction permit for a utilization facility (e.g., a nuclear power plant), would be deleted and a new § 50.47 would be added for this purpose. This change would avoid any confusion that might occur when § 50.55a is amended for purposes not relevant to the appendices. The new § 50.47 also would describe when an exemption must be requested of the Commission for acceptance of a proposed alternative to the requirements of Appendices G and H. Conversely, several paragraphs of Appendices G and H would be amended to state that a proposed alternative may be accepted by the Director of Nuclear Reactor Regulation if the proposed alternative provides a margin of safety equivalent to that achieved by the specified requirement.

Significant differences between the existing regulations in Appendix G and the proposed amendments are:<sup>2</sup>

- ¶II.G. The definition of "adjusted reference temperature" would be changed to make the definition applicable to test data over a broader range of severity of radiation damage.
- ¶II.H. The definition of "beltline" would be changed to more clearly delineate which parts of the vessel are of

concern from the standpoint of surveillance of radiation damage.

- ¶II.J. The definition of "integrated surveillance program" would be removed from Appendix G and a more complete discussion of such a program would be included in paragraph II.C. of Appendix H.

§ III. Section III, "Fracture Toughness Tests," would be reduced in length because most of the pertinent requirements could be incorporated by referencing the ASME Code.

- ¶III.A. Language would be added to paragraph III.A. to clarify how the fracture toughness test requirements would be applied to "old" plants, those for which the reactor vessel was constructed to an ASME Code earlier than the Summer 1972 Addenda to the 1971 Edition. This language would clarify the Commission's intention that all plants must meet the required margins of safety and the other fracture prevention requirements of Appendices G and H; but the owners of "old" plants may, when approved by the Director of Nuclear Reactor Regulation, use fracture toughness tests and fracture analyses other than those required by Appendices G and H to demonstrate that the required margins of safety have been met.

§ IV. As amended, Section IV, "Fracture Toughness Requirements" would incorporate by reference the fracture toughness requirements of the ASME Code and then give certain supplemental requirements, thereby deleting much technical detail from the regulation.

- ¶IV.A.2.b. As an alternative to the existing general requirement for fracture toughness of nozzles, flanges and shell regions near structural discontinuities, a specific pressure-temperature requirement would be added.

¶IV.A.2.c. For boiling water reactors, the criticality limit would be reduced to permit them to go critical earlier during startup. A systems analysis has shown that the existing limit is more restrictive than is necessary to provide the required safety margin.

- ¶IV.A.2.d. The minimum permissible temperature for system hydrostatic pressure tests would be reduced when performed when there is no fuel in the reactor (and thus no radiological hazard to the public) to improve the efficiency of the inspection operation.

¶IV.B. The 50 ft lb requirement for Charpy upper shelf energy would be stated explicitly. Language would be added to permit acceptance of a lower value by the Director of Nuclear Reactor Regulation if a fracture

analysis showed that the margin of safety against ductile fracture was equivalent to the margin of safety against fracture in the transition region required by Appendix G of the ASME Code.

- ¶V.B. A requirement would be added that material toughness values to be used in fracture analyses are those predicted for the material near the tip of the assumed flaw at its deepest part.

Significant differences between the existing regulations in Appendix H and the proposed amendments are:

- ¶II.B. As revised, paragraph II.B. would incorporate by reference ASTM E 185, and reference to the 1973 edition of ASTM E 185 would be deleted. Language would be added to permit the use of the 1979 edition or an earlier edition if it was the current edition at the time the action was taken. For example, the earliest edition of ASTM E 185 that could be used in the selection of surveillance materials, preparation of specimens, and construction of surveillance capsules would be the edition that was current on the issue date of the ASME Code to which the reactor vessel was purchased.

¶II.C.3. Most of this paragraph would be deleted, because the requirements for withdrawal schedules contained in the 1979 edition of ASTM E 185 provide satisfactory criteria for scheduling surveillance information gathering.

- ¶II.C.4. Expanded criteria would be given for an integrated surveillance program for a set of reactors of similar design and operating features. In an integrated program, surveillance capsules from one or more reactors are irradiated in other reactors in the set.

§III. Section III would be deleted because its provisions are covered in Appendix G, Section V.

- §IV. Reporting requirements for the test results from each capsule withdrawal would be clarified and a time limit for submittal of the report would be specified.

Staff of the Commission's Office of Standards Development has prepared a value/impact statement for the proposed amendment, which provides additional technical details and justification. This statement is available for inspection by the public in the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C. Single copies of the value/impact statement may be obtained by request addressed to the Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: P. N. Randall, (301) 443-5997.

<sup>1</sup> Standard Recommended Practice for Surveillance Tests for Light Water Cooled Nuclear Power Reactor Vessels. Copies may be obtained from the American Society for Testing and Materials, 1918 Race St., Philadelphia, Pa. 19103. Copies will be available for inspection at the Commission's Public Document Room, 1717 H St., NW., Washington, D.C.

<sup>2</sup> Listed according to existing paragraph numbers. See Enclosure 3.

## PART 50 • PROPOSED RULE MAKING

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of title 5 of the United States Code, notice is hereby given that adoption of the following amendments of 10 CFR Part 50 is contemplated. All interested persons who wish to submit written comments or suggestions in connection with the proposed amendments should send them to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch by January 13, 1981. Copies of comments received may be examined in the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C.

1. Section 50.55a is amended by deleting paragraph (i) and inserting the word "Reserved" in its place.

2. A new § 50.47 is added to 10 CFR Part 50 to read as follows:

### § 50.47 Acceptance criteria for Fracture Prevention Measures for Light Water Nuclear Power Reactors.

(a)(1) Except as provided in paragraph (a)(2) of this section all light-water nuclear power reactors shall meet the fracture toughness and material surveillance program requirements for the reactor coolant pressure boundary set forth in Appendices G and H to this part.

(2) Proposed alternatives to the described requirements or portions thereof may be used when an exemption is granted by the Commission as authorized by § 50.12. In addition, the applicant must demonstrate that (i) compliance with the specified requirements would result in hardships or unusual difficulties without a compensating increase in the level of quality and safety and (ii) the proposed alternatives would provide an adequate level of quality and safety.

(b) [Reserved]

### § 50.12 [Amended]

3. Paragraph (a) of § 50.12 is amended by adding the following sentence at the end of the paragraph:

• • • To obtain an exemption to Appendices G and H to this part, the requirements of paragraph 50.47(a)(2) must be met in addition to the requirements of this paragraph.

4. Appendices G and H to 10 CFR Part 50 are revised to read as follows:

### Appendix G—Fracture Toughness Requirements

#### Table of Contents

- I. Introduction and Scope
- II. Definitions
- III. Fracture Toughness Tests
- IV. Fracture Toughness Requirements

### V. Inservice Requirements—Reactor Vessel Beltline Materials

#### I. Introduction and Scope

This appendix specifies fracture toughness requirements for ferritic materials of pressure-retaining components of the reactor coolant pressure boundary of light water nuclear power reactors to provide adequate margins of safety during any condition of normal operation, including anticipated operational occurrences and system hydrostatic tests, to which the pressure boundary may be subjected over its service lifetime.

The requirements of this appendix apply to the following materials:

A. Carbon and low-alloy ferritic steel plate, forgings, castings, and pipe with specified minimum yield strengths not over 50,000 psi (345 MPa), and to those with specified minimum yield strengths greater than 50,000 psi (345 MPa) but not over 90,000 psi (621 MPa) if qualified by using methods equivalent to those described in paragraph G-2110 of the ASME Code.<sup>1</sup>

B. Welds and weld heat-affected zones in the materials specified in section I.A.

C. Materials for bolting and other types of fasteners with specified minimum yield strengths not over 130,000 psi (896 MPa).

Adequacy of the fracture toughness of other ferritic materials shall be demonstrated to the Director of Nuclear Reactor Regulation on an individual case basis.

#### II. Definitions

A. "ASME Code" means the American Society of Mechanical Engineers Boiler and Pressure Vessel Code. If no section is specified, the reference is to Section III, Division 1, "Rules for Construction of Nuclear Power Plant Components." "Section XI" means Section XI, Division 1, "Rules for Inservice Inspection of Nuclear Power Plant Components." If no edition or addenda is specified, the applicable ASME Code edition and addenda<sup>2</sup> and any limitations and modifications thereof are specified by § 50.55a, Codes and Standards.

B. "Ferritic material" means carbon and low-alloy steels, higher alloy steels including all stainless alloys of the 4xx series, and maraging and precipitation hardening steels with a predominantly body-centered cubic crystal structure.

C. "System hydrostatic tests" means all preoperational system leakage and hydrostatic pressure tests and all system leakage and hydrostatic pressure tests performed during the service life of the pressure boundary in compliance with the ASME Code, Section XI.

D. "Specified minimum yield strength" means the minimum yield strength (in the unirradiated condition) of a material specified in the construction code under which the component is built pursuant to § 50.55a.

<sup>1</sup> Defined in paragraph II.A. The latest Edition and Addenda permitted by paragraph 50.55a(b) at the time the analysis is made shall be used for the purposes of paragraph I.A.

<sup>2</sup> Copies may be obtained from the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, N.Y. 10017. Copies are available for inspection at the Commission's Public Document Room, 1717 H St. N.W., Washington, D.C.

E. "Reference temperature" means the reference temperature, RT<sub>NDT</sub>, as defined in the ASME Code.

F. "Adjusted reference temperature" means the reference temperature as adjusted for irradiation effects (see Section V of this Appendix) by adding to RT<sub>NDT</sub> the temperature shift in the average Charpy curve for the irradiated material relative to that for the unirradiated material, measured at the 30 ft lb (41J) level.

G. "Beltline" or "Beltline region of reactor vessel" means the region of the reactor vessel (shell material including welds, heat affected zones, and plates or forgings) that directly surrounds the effective height of the active core and adjacent regions of the reactor vessel that are predicted to experience sufficient neutron radiation damage to be considered in the selection of the most limiting material with regard to radiation damage.

#### III. Fracture Toughness Tests

A. To demonstrate compliance with the fracture toughness requirements of Sections IV and V of this appendix, ferritic materials shall be tested in accordance with the ASME Code and, for the beltline materials, the test requirements of Appendix H. For a reactor vessel that was constructed to an ASME Code earlier than the Summer 1972 Addenda of the 1971 Edition (pursuant to § 50.55a), the fracture toughness data and data analyses shall be supplemented in a manner approved by the Director of Nuclear Reactor Regulation to demonstrate equivalence with the fracture toughness requirements of this appendix.

B. Test methods for supplemental fracture toughness tests described in paragraph V.C.2 shall be submitted to and approved by the Director of Nuclear Reactor Regulation prior to testing.

C. All fracture toughness test programs conducted in accordance with paragraphs A and B of this Section shall comply with ASME Code requirements for calibration of test equipment, qualification of test personnel, and retention of records of these functions and of the test data.

#### IV. Fracture Toughness Requirements

A. The pressure-retaining components of the reactor coolant pressure boundary that are made of ferritic materials shall meet the requirements of the ASME Code supplemented as follows for fracture toughness during system hydrostatic tests and any condition of normal operation, including anticipated operational occurrences.

1. Reactor vessel beltline materials shall have minimum Charpy upper-shelf energy of 75 ft lb (102J) initially and shall maintain minimum upper-shelf energy throughout the life of the vessel of 50 ft lb (68J), unless it is demonstrated in a manner approved by the Director of Nuclear Reactor Regulation that lower values of upper-shelf energy will provide margins of safety against fracture equivalent to those required by Appendix G of the ASME Code.<sup>3</sup>

2. When the core is not critical, pressure-temperature limits for the reactor vessel shall be at least as conservative as those obtained

<sup>3</sup> The latest Edition and Addenda permitted by paragraph 50.55a(b) at the time the analysis is made shall be used for the purposes of paragraphs IV.A.1 and IV.A.2.

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by following the methods of analysis and the required margins of safety of Appendix G of the ASME Code<sup>3</sup> supplemented by the requirements of Section V of this Appendix. In addition, when pressure exceeds 20 percent of the preservice system hydrostatic test pressure, the temperature of the stressed regions of nozzles, flanges and other structural discontinuities shall be at least 150° F above (83 C above) the reference temperature of the material in those regions unless a lower temperature can be justified by showing that the margins of safety for those regions are equivalent to those required for the beltline when it is controlling. The justification submitted for the pressure temperature limits shall describe the methods of analysis used.

3. When the core is critical (other than for the purpose of low-level physics tests) the temperature of the reactor vessel shall not be lower than 40° F above (22 C above) the minimum permissible temperature of paragraph 2. of this section nor lower than the minimum permissible temperature for the inservice system hydrostatic pressure test. An exception may be made for boiling water reactor vessels when water level is within the normal range for power operation and the pressure is less than 20 percent of the preservice system hydrostatic test pressure, in which case the minimum permissible temperature is 60° F above (33 C above) the reference temperature of the closure flange regions that are highly stressed by the bolt preload.

4. If there is no fuel in the reactor during system hydrostatic pressure tests or leak tests, the minimum permissible test temperature shall be  $RT_{NDT} + 60° F$  ( $RT_{NDT} + 33 C$ ).

5. If there is fuel in the reactor during system pressure tests or leak tests, the requirements of paragraphs 2 or 3 shall apply, depending on whether the core is critical during the test.

B. Reactor vessels for which the predicted value of upper shelf energy at end of life is below 50 ft lb or the predicted value of adjusted reference temperature at end of life exceeds 200° F (93 C) shall be designed to permit a thermal annealing treatment to recover material toughness properties of ferritic materials of the reactor vessel beltline.

### V. Inservice Requirements—Reactor Vessel Beltline Material

A. The effects of neutron radiation on the reference temperature and upper shelf energy of reactor vessel beltline materials, including welds, shall be predicted from the results of pertinent radiation effects studies in addition to the results of the surveillance program of Appendix H.

B. Reactor vessels may continue to be operated only for that service period within which the requirements of Section IV are satisfied using the predicted value of the adjusted reference temperature and the predicted value of the upper shelf energy at the end of the service period to account for the effects of radiation on the fracture toughness of the beltline materials. These predictions shall be made for the radiation conditions at the tip of the assumed flaw at its deepest part. The highest adjusted reference temperature and the lowest upper shelf energy level of all the beltline materials

shall be used to verify that the fracture toughness requirements are satisfied.

C. In the event that the requirements of Section V.B. cannot be satisfied, reactor vessels may continue to be operated provided all of the following requirements are satisfied:

1. A volumetric examination of the beltline materials that do not satisfy the requirements of Section V.B. including 100 percent of any associated welds shall be made and any flaws evaluated according to Section XI of the ASME Code and as otherwise specified by the Director of Nuclear Reactor Regulation.

2. Additional evidence of the fracture toughness of the beltline materials after exposure to neutron irradiation shall be obtained from results of supplemental fracture toughness tests.

3. An analysis shall be performed that conservatively demonstrates, making appropriate allowances for all uncertainties, the existence of equivalent margins of safety for continued operation.

D. If the procedures of section V.C. do not indicate the existence of an equivalent safety margin, the reactor vessel beltline may, subject to the approval of the Director of Nuclear Reactor Regulation, be given a thermal annealing treatment to recover the fracture toughness of the material. The degree of recovery shall be measured by testing additional specimens that have been withdrawn from the surveillance program capsules and that have been annealed under the same time-at-temperature conditions as those given the beltline material. The results shall provide the basis for establishing the adjusted reference temperature and upper shelf energy after annealing. The reactor vessel may continue to be operated only for that service period within which the predicted fracture toughness of the beltline region materials satisfies the requirements of Section IV.A. using the values of adjusted reference temperature and upper shelf energy that include the effects of annealing and subsequent irradiation.

E. The proposed programs for satisfying the requirements of Sections V.C. and V.D. shall be reported to the Director of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, for review and approval on an individual case basis at least 3 years prior to the date when the predicted fracture toughness levels will no longer satisfy the requirements of Section V.B.

### Appendix H—Reactor Vessel Material Surveillance Program Requirements

#### Table of Contents

- I. Introduction
- II. Surveillance Program Criteria
- III. Report of Test Results

#### I. Introduction

The purpose of the material surveillance program required by this appendix is to monitor changes in the fracture toughness properties of ferritic materials in the reactor vessel beltline region of light water nuclear power reactors resulting from their exposure to neutron irradiation and the thermal environment. Under this program, fracture toughness test data are obtained from material specimens exposed in surveillance capsules, which are withdrawn periodically

from the reactor vessel. These data will be used as described in Sections IV and V of Appendix G.

#### II. Surveillance Program Criteria

A. No material surveillance program is required for reactor vessels for which it can be conservatively demonstrated by analytical methods applied to experimental data and tests performed on comparable vessels, making appropriate allowances for all uncertainties in the measurements, that the peak neutron fluence ( $E < 1 \text{ MeV}$ ) at the end of the design life of the vessel will not exceed  $10^{17} \text{ n/cm}^2$ .

B. Reactor vessels that do not meet the conditions of paragraph II.A. shall have their beltline materials monitored by a surveillance program complying with ASTM E 185,<sup>4</sup> except as modified by this Appendix. ASTM E 185 was approved for incorporation by reference by the Director of the Federal Register, on May 29, 1973.

1. That part of the surveillance program conducted prior to the first capsule withdrawal shall meet the requirements of the edition of ASTM E 185 that is current on the issue date of the ASME Code to which the reactor vessel was purchased. For each capsule withdrawal, the test procedures and reporting requirements shall meet the requirements of the edition of E 185 in effect on the date of capsule withdrawal, to the extent practical for the configuration of the specimens in the capsule. For any part of the surveillance program, later editions of E 185 may be used instead of the editions previously specified, but including only those editions through 1979.

2. Surveillance specimen capsules shall be located near the inside vessel wall in the beltline region, so that the specimen irradiation history duplicates to the extent practicable, within the physical constraints of the system, the neutron spectrum, temperature history, and maximum neutron fluence experienced by the reactor vessel inner surface. If the capsule holders are attached to the vessel wall or to the vessel cladding, construction and inservice inspection of the attachments and attachment welds shall be done according to the requirements for permanent structural attachments to reactor vessels given in the ASME Code, Sections III and XI. The design and location of the capsules shall permit insertion of replacement capsules. Accelerated irradiation capsules may be used in addition to the required number of surveillance capsules specified in ASTM E 185.

3. Proposed withdrawal schedules shall be submitted with a technical justification therefor to the Director of Nuclear Reactor Regulation for approval. The proposed schedule shall not be implemented without prior approval.

C. An integrated surveillance program may be considered for a set of reactors that have similar design and operating features. The

<sup>4</sup>Standard Recommended Practice for Surveillance Tests for Light Water Cooled Nuclear Power Reactor Vessels. Copies may be obtained from the American Society for Testing and Materials, 1916 Race St., Philadelphia, Pa. 19103. Copies will be available for inspection at the Commission's Public Document Room, 1717 H St., NW., Washington, D.C.

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representative materials chosen for surveillance from each reactor in the set may be irradiated in one or more of the reactors, but there must be an adequate dosimetry program for each reactor. No reduction in the requirements for number of materials to be irradiated, specimen types, or number of specimens per reactor is permitted, but the amount of testing may be reduced if the initial results agree with predictions. Integrated surveillance programs must be approved by the Director of Nuclear Reactor Regulation on a case-by-case basis. Criteria

for approval include the following considerations:

1. The design and operating features of the reactors in the set shall be sufficiently similar to permit accurate comparisons of the predicted amount of radiation damage as a function of total power output.
2. There shall be adequate arrangements for data sharing between plants.
3. There shall be a contingency plan to assure that the surveillance program for each reactor will not be jeopardized by operation at reduced power level or by an extended outage of another reactor from which data are expected.
4. There shall be substantial advantages to be gained in reduced power outages or personnel exposure to radiation, achieved by not requiring surveillance capsules in all reactors in the set.

### III. Report of Test Results

A. Each capsule withdrawal and the results of the fracture toughness tests shall be the subject of a summary technical report to be submitted for approval to the Director of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, within 90 days after completion of testing. The Director shall be notified at least 30 days in advance of the capsule withdrawal, giving the expected date of completion of testing and submittal of report.

B. The report shall include the data required by ASTM E 185, as required by paragraph II.B.1, and the results of all fracture toughness tests conducted on the beltline materials in the irradiated and unirradiated conditions.

C. If a change in the operating pressure-temperature limits given in the Technical Specifications is required, the revised limits shall be submitted with the report, including any changes made in operating procedures required to meet the limits.

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# UNITED STATES NUCLEAR REGULATORY COMMISSION RULES and REGULATIONS

## TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

### PART 51

### LICENSING AND REGULATORY POLICY AND PROCEDURES FOR ENVIRONMENTAL PROTECTION

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AUTHORITY: Sec. 202, 88 Stat. 1244 (42 U.S.C. 5842)

#### § 51.1 Purpose and scope.

(a) The National Environmental Policy Act of 1969 (83 Stat. 852), implemented by Executive Order 11514 and the Council on Environmental Quality's Guidelines of August 1, 1973 (38 FR 20550), requires that all agencies of the Federal Government prepare detailed environmental statements on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment. The principal objective of the National Environmental Policy Act of 1969 is to build into the agency decision making process an appropriate and careful consideration of environmental aspects of proposed actions.

(b) This part sets forth the Nuclear Regulatory Commission policy and procedures for the preparation and processing of environmental impact statements and related documents pursuant to section 102(2)(C) of the National Environmental Policy Act of 1969 in connection with the Commission's licensing and regulatory activities.

(c) This part does not address any limitations on the Commission's authority and responsibility pursuant to the National Environmental Policy Act of 1969 imposed by the Federal Water Pollution Control Act (86 Stat. 916). This matter is addressed in an Interim Policy Statement published in the FEDERAL REGISTER on January 29, 1973 (38 FR 2679).

#### § 51.2 Definitions.

(a) "Commission" means the Nuclear Regulatory Commission or its authorized representatives.

(b) "NEPA" means the National Environmental Policy Act of 1969.

(c) "Environmental report" means a document submitted to the Commission by applicants for permits, licenses, and

orders, and amendments thereto and renewals thereof, or by petitioners for rulemaking, in order to aid the Commission in complying with section 102(2)(C) of NEPA.

(d) "Notice of intent" means a notice that an environmental impact statement will be prepared and processed.

(e) "Environmental impact statement" means the detailed statement prepared by the Commission pursuant to section 102(2)(C) of NEPA.

(f) "Negative declaration" means a statement that the Commission has determined not to prepare an environmental impact statement for a particular action.

(g) "Environmental impact appraisal" means a document which provides the basis for a negative declaration.

#### § 51.3 Interpretations.

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

#### § 51.4 Specific exemptions.

The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the regulations in this part as it determines are authorized by law and are otherwise in the public interest.

#### Subpart A—General Requirements for Environmental Impact Statements, Negative Declarations, and Impact Appraisals

- 51.5 Actions requiring preparation of environmental impact statements, negative declarations, environmental impact appraisals; actions excluded.

(a) An environmental impact statement will be prepared and circulated



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prior to taking any of the following types of actions.

(1) Issuance of a permit to construct a nuclear power reactor, testing facility, or fuel reprocessing plant pursuant to Part 50 of this chapter;

(2) Issuance of a full power or design capacity license to operate a nuclear power reactor, testing facility, or fuel reprocessing plant pursuant to Part 50 of this chapter;

(3) Issuance of a permit to construct or a design capacity license to operate an isotopic enrichment plant pursuant to § 50.22 of this chapter;

(4) Issuance of a license to possess and use special nuclear material for processing and fuel fabrication, scrap recovery, or conversion of uranium hexafluoride pursuant to Part 70 of this chapter;

(5) Issuance of a license to possess and use source material for uranium milling or production of uranium hexafluoride pursuant to Part 40 of this chapter;

(6) Issuance of a license authorizing commercial radioactive waste disposal by land burial pursuant to Parts 30, 40, and/or 70 of this chapter;

(7) Conversion of a provisional operating license for a nuclear power reactor, testing facility or fuel reprocessing plant to a full power or design capacity license pursuant to Part 50 of this chapter where no final environmental impact statement has been previously prepared;

(8) Issuance of a license to manufacture pursuant to Appendix M of Part 50 of this chapter;

(9) Amendments of Parts 30 and 40 of this chapter concerning the exemption from licensing and regulatory requirements of any equipment, device, commodity or other product containing byproduct material or source material.

(10) Issuance of a license pursuant to Part 72 of this chapter for the storage of spent fuel in an independent spent fuel storage installation (ISFSI) at a site not occupied by a nuclear power reactor.

(11) Any other action which the Commission determines is a major Commission action significantly affecting the quality of the human environment.

(b) Many licensing and regulatory actions of the Commission other than those listed in paragraph (a) may or may not require preparation of an environmental impact statement, depending upon the circumstances. In determining whether an environmental impact statement should or should not be prepared for such action, the Commission shall be guided by the Council on Environmental Quality Guidelines, 40 CFR 1500.6. Such other actions include:

(1) Issuance of a permit to construct, or a full power or design capacity license to operate, a production or utilization facility other than a nuclear power reactor, testing facility, fuel reprocessing plant, or isotopic enrichment plant of the type specified in paragraph (a) of this section.

(2) Issuance of an amendment to a construction permit or full power or design capacity operating license for a nuclear power reactor, testing facility, fuel reprocessing plant, isotopic enrichment plant licensed pursuant to § 50.22 of this chapter or to a license to manufacture that would authorize a significant change in the types or a significant increase in the amounts of effluents or a significant increase in the authorized power level;

(3) Issuance of a license to operate a power reactor, testing facility, fuel reprocessing plant or isotopic enrichment plant at less than full power or at less than the design capacity;

(4) Issuance of an amendment which would authorize a significant change in the types or significant increase in the potential for accidental releases of a license for:

(i) The possession and use of special nuclear material for processing and fuel fabrication, scrap recovery, or conversion of uranium hexafluoride, pursuant to Part 70 of this chapter;

(ii) The possession and use of source material for uranium milling or production of uranium hexafluoride pursuant to Part 40 of this chapter;

(iii) Authorizing commercial radioactive waste disposal by land burial pursuant to Parts 30, 40, and/or 70 of this chapter.

(iv) The storage of spent fuel in an independent spent fuel storage installation (ISFSI) pursuant to Part 72 of the chapter.

(5) Renewal of licenses to conduct activities listed in paragraph (b)(4)(i)-(iv) of this section.

(6) Substantive and significant amendments (from the standpoint of environmental impact) of Parts 20, 30, 40, 50, 70, 71, 73, or 100 of this chapter;

(7) License amendments or orders authorizing the dismantling or decommissioning of nuclear power reactors, testing facilities, fuel reprocessing plants and isotopic enrichment plants;

(8) Termination of a license for the possession and use of source material for uranium milling at the request of the licensee.

(9) Issuance of a license pursuant to Part 72 of this chapter for the storage of spent fuel in an independent spent fuel storage installation (ISFSI) on the site of a nuclear power reactor.

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(c)(1) The environmental impact of proposed licensing and regulatory actions listed in paragraph (b) will be evaluated, and if it is determined that an environmental impact statement should be prepared, a notice of intent will be published and distributed in accordance with § 51.50(b) and draft and final environmental impact statements will be prepared. If it is determined that an environmental impact statement need not be prepared for an action listed in paragraph (b), a negative declaration and environmental impact appraisal will, unless otherwise determined by the Commission, be prepared in accordance with §§ 51.7 and 51.50(d).

(2) If, subsequent to the publication of a notice of intent concerning an action, it is determined that an environmental impact statement need not be prepared in connection with that action, or if it is determined that an environmental impact statement need not be prepared in connection with any action with respect to which the Council on Environmental Quality has requested that an environmental impact statement be prepared, a negative declaration and an environmental impact appraisal will be prepared in accordance with §§ 51.7 and 51.50(d).

(3) The Commission may require applicants for permits, licenses, and orders, and amendments thereto, and renewals thereof, and petitioners for rule making covered by paragraph (b) of this section to submit such information to the Commission as may be useful in aiding the Commission in the preparation of an environmental impact appraisal.

(d) Unless otherwise determined by the Commission, an environmental impact statement, negative declaration, or environmental impact appraisal need not be prepared in connection with the following types of actions:

(1) Issuance of notices and orders pursuant to Subpart B of Part 2 of this chapter;

(2) Amendments to Parts 2, 19, 51, 55, 140, 150, and 170 of this chapter;

(3) Non-substantive and insignificant amendments (from the standpoint of environmental impact) of Parts 20, 30, 40, 50, 70, 71, 73, 10, or 110† of this chapter;

(4) Issuance of a materials license or amendment to or renewal of a materials or facility license or permit or order other than those covered by paragraphs (a) and (b) of this section.

†Amended 43 FR 6915.

### § 51.6 Notice of intent.

Whenever the Commission determines that an environmental impact statement will be prepared in connection with an action, a notice of intent will be published and distributed in accordance with § 51.50(b).

### § 51.7 Negative declarations; environmental impact appraisals.

(a) Negative declarations. The negative declaration required by § 51.5(c) will be prepared prior to the taking of the associated action and will state that the Commission has decided not to prepare an environmental impact statement for the particular action and that an environmental impact appraisal setting forth the basis for that determination is available for public inspection. Negative declarations will be published and made publicly available in accordance with §§ 51.50(d) and 51.55. Lists of negative declarations will be maintained and made publicly available in accordance with § 51.54(h).

(b) Environmental impact appraisals. An environmental impact appraisal will be prepared in support of all negative declarations. The appraisal will include:

(1) A description of the proposed action;

(2) A summary description of the probable impacts of the proposed action on the environment; and

(3) The basis for the conclusion that no environmental impact statement need be prepared.

Lists of environmental impact appraisals will be maintained and made publicly available in accordance with § 51.54(h). Impact appraisals will be made available to the public upon request in accordance with § 51.55.

### Subpart B—Facilities

#### § 51.20 Applicant's Environmental Report—Construction Permit Stage.

(a) Environmental considerations. Each applicant<sup>1</sup> for a permit to construct a production or utilization facility covered by § 51.5(a) shall submit with its application a separate document, entitled "Applicant's Environmental Report—Construction Permit Stage," which contains a description of the proposed action, a statement of its purposes, and a description of the environment affected, and which discusses the following considerations:

(1) The probable impact of the proposed action on the environment;

(2) Any probable adverse environmental effects which cannot be avoided should the proposal be implemented;

(3) Alternatives to the proposed action;

(4) The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and

(5) Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented. The discussion of alternatives to the proposed action required by paragraph (a)(3) shall be sufficiently complete to aid the Commission in developing and exploring, pursuant to section 102(2)(E)\* of NEPA, "appropriate alternatives \*\*\* in any proposal

<sup>1</sup> Where the "applicant", as used in this part, is a Federal agency, different arrangements for implementing NEPA may be made, pursuant to the Guidelines established by the Council on Environmental Quality.

\*Amended 43 FR 7209.

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which involves unresolved conflicts concerning alternative uses of available resources."

(b) Cost-benefit analysis. The Environmental Report required by paragraph (a) shall include a cost-benefit analysis which considers and balances the environmental effects of the facility and the alternatives available for reducing or avoiding adverse environmental effects, as well as the environmental, economic, technical and other benefits of the facility. The cost-benefit analysis shall, to the fullest extent practicable, quantify the various factors considered. To the extent that such factors cannot be quantified, they shall be discussed in qualitative terms. The Environmental Report should contain sufficient data to aid the Commission in its development of an independent cost-benefit analysis.

(c) Status of compliance. The Environmental Report required by paragraph (a) shall include a discussion of the status of compliance of the facility with applicable environmental quality standards and requirements (including, but not limited to, applicable zoning and land-use regulations and thermal and other water pollution limitations or requirements promulgated or imposed pursuant to the Federal Water Pollution Control Act) which have been imposed by Federal, State, regional, and local agencies having responsibility for environmental protection. The discussion of alternatives in the Report shall include a discussion whether the alternatives will comply with such applicable environmental quality standards and requirements. The environmental impact of the facility and alternatives shall be fully discussed with respect to matters covered by such standards and requirements irrespective of whether a certification or license from the appropriate authority has been obtained (including, but not limited to, any certification obtained pursuant to section 401 of the Federal Water Pollution Control Act<sup>3</sup>). Such discussion shall be reflected in the cost-benefit analysis prescribed in paragraph (b). While satisfaction of Commission standards and criteria pertaining to radiological effects will be necessary to meet the licensing requirements of the Atomic Energy Act, the cost-benefit analysis prescribed in paragraph (b) shall, for the purposes of NEPA, consider the radiological effects, together with the other effects, of the facility and alternatives.

(d) The information submitted pursuant to paragraphs (a)-(c) of this section should not be confined to data supporting the proposed action but should include adverse data as well.

(e) The Environmental Report required by paragraph (a) for light-water-cooled nuclear power reactors shall take Table S-3, Table of Uranium Fuel Cycle Environmental Data, as the basis for evaluating the contribution of the environmental effects of uranium

mining and milling, the production of uranium hexafluoride, isotopic enrichment, fuel fabrication, reprocessing of irradiated fuel, transportation of radioactive materials and management of low level wastes and high level wastes related to uranium fuel cycle activities to the environmental costs of licensing the nuclear power reactor. Table S-3 shall be included in the Report and may be supplemented by a discussion of the environmental significance of the data set forth in the Table as weighed in the cost-benefit analysis for the proposed facility. This paragraph applies to any applicant's environmental report submitted on September 4, 1979, or thereafter.

(f) Number of copies. Each applicant for a permit to construct a production or utilization facility covered by § 51.5(a) shall submit the number of copies, as specified in § 51.40, of the Environmental Report required by § 51.5(a).

(g) (1) The Environmental Report required by paragraph (a) for light-water cooled nuclear power reactors shall contain either (i) a statement that the transportation of cold fuel to the reactor and irradiated fuel from the reactor to a fuel reprocessing plant and the transportation of solid radioactive wastes from the reactor to waste burial grounds is within the scope of this paragraph, and as the contribution of the environmental effects of such transportation to the environmental costs of licensing the nuclear power reactor, the values set forth in the following Summary Table S-4; or (ii) if such transportation does not fall within the scope of this paragraph, a full description and detailed analysis of the environmental effects of such transportation and, as the contribution of such effects to the environmental costs of licensing the nuclear power reactor, the values determined by such analyses for the environmental impact under normal conditions of transport and the environmental risk from accidents in transport.

(2) This paragraph applies to the transportation of fuel and wastes to and from a nuclear power reactor only if:

(i) The reactor is a light-water-cooled nuclear power reactor with a core thermal power level not exceeding 3,800 megawatts;

(ii) The reactor fuel is in the form of sintered uranium dioxide pellets encapsulated in zircaloy rods with a uranium-235 enrichment not exceeding 4% by weight;

(iii) The average level of irradiation of the irradiated fuel from the reactor does not exceed 33,000 megawatt days per metric ton and no irradiated fuel assembly is shipped until at least 90 days have elapsed after the fuel assembly was discharged from the reactor;

(iv) Waste (other than irradiated fuel) shipped from the reactor is in the form of packaged, solid wastes; and

(v) Unirradiated fuel is shipped to the reactor by truck; irradiated fuel is shipped from the reactor by truck, rail, or barge; and waste other than irradiated fuel is shipped from the reactor by truck or rail.

(3) This paragraph does not apply to any applicant's environmental report submitted prior to February 5, 1975.

### § 51.21 Applicant's Environmental Report—Operating License Stage.

Each applicant for a license to operate a production or utilization facility covered by § 51.5(a) shall submit with its application the number of copies, as specified in § 51.40, of a separate document,\* to be entitled "Applicant's Environmental Report—Operating License Stage," which discusses the same matters described in § 51.20 but only to the extent that they differ from those discussed or reflect new information in addition to that discussed in the final environmental impact statement prepared by the Commission in connection with the construction permit. The "Applicant's Environmental Report—Operating License Stage" may incorporate by reference any information contained in the Applicant's Environmental Report or final environmental impact statement previously prepared in connection with the construction permit. With respect to the operation of nuclear reactors, the applicant, unless otherwise required by the Commission, shall submit the "Applicant's Environmental Report—Operating License Stage" only in connection with the first licensing action that would authorize full power operation of the facility.

#### DRAFT ENVIRONMENTAL IMPACT STATEMENTS

### § 51.22 General.

The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards or their designee, as appropriate, will prepare a draft environmental impact statement for facility licensing actions covered by §§ 51.20 and 51.21 as soon as practicable after receipt of the Applicant's Environmental Report and publication of the notice of intent and availability of the report required by § 51.50.

### § 51.23 Contents of Draft Environmental Statement.

(a) The draft environmental impact statement will include the matters specified in § 51.20 (a), (c), and (g) and § 51.21, as appropriate.

(b) The draft environmental impact statement will contain an analysis of any problems and objections raised by other Federal, State, and local agencies and by interested persons in the review process.

(c) The draft environmental impact statement will include a preliminary cost-benefit analysis which considers and balances the environmental and other effects of the facility and the alternatives available for reducing or avoiding adverse environmental and other effects, as well as the environmental, economic, technical and other benefits of the facility. The contribution of the environmental effects of the uranium fuel cycle activities specified in § 51.20(e) shall be evaluated on the basis of impact values set forth in Table S-3, Table of Uranium Fuel Cycle Environmental Data, which shall be set out in the draft

\*Amended 41 FR 15832.

†Amended 44 FR 16360.

UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

PART  
70

DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL ★

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AUTHORITY: Secs. 51, 53, 161, 182, 183, 68 Stat. 929, 930; as amended, 948, as amended, 953, as amended, 954 (42 USC 2071, 2073, 2201, 2232, 2233); secs. 202, 206, 88 Stat. 1244, 1246 (42 USC 5842, 5846) unless otherwise noted. For the purposes of sec. 223, 68 Stat. 958, as amended (42 USC 2273), §§ 70.32(a)(16) and 70.41(a) issued under sec. 161b, 68 Stat. 948, 42 USC 2201(b); and §§ 70.51 to 70.55 issued under sec. 161c, 68 Stat. 950, as amended (42 USC 2201(c)). \*\*\* Section 70.21(g) also issued under sec. 122, 68 Stat. 939 (42 USC, 2152).

GENERAL PROVISIONS

§ 70.1 Purpose.

(a) Except as provided in paragraph (c) of this section, the regulations of this part

establish procedures and criteria for the issuance of licenses to receive title to, own, acquire, deliver, receive, possess, use, and initially\* transfer special nuclear material; and establish and provide for the terms and conditions upon which the Commission will issue such licenses.

(b) The regulations contained in this part are issued pursuant to the Atomic Energy Act of 1954, as amended (68 Stat. 919) and Title II of the Energy Reorganization Act of 1974 (88 Stat. 1242).

(c) The regulations in Part 72 of this chapter establish requirements, procedures, and criteria for the issuance of licenses to possess spent fuel and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation (ISFSI) and the terms and conditions under which the Commission will issue such licenses.

70.2 Scope.

Except as provided in §§ 70.11 to 70.13, inclusive, the regulations in this part apply to all persons in the United States.

70.3 License requirements.

No person subject to the regulations in this part shall receive title to, own, acquire, deliver, receive, possess, use, or transfer\* special nuclear material except as authorized in a license issued by the Commission pursuant to these regulations.

70.4 Definitions.

As used in this part:

(a) "Act" means the Atomic Energy Act of 1954 (68 Stat 919), including any amendments thereto;

(a-1) "Department" and "Department of Energy" means the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565, 42 U.S.C. 7101 *et seq.*), to the extent that the Department, or its duly authorized representatives, exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers and components and transferred to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104(b), (c) and (d) of the Energy Reorganization Act of 1974 (Pub. L. 93-438, 88 Stat. 1233 at 1237, 42 U.S.C. 5814) and retransferred to the Secretary of Energy pursuant to section 301(a) of the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565 at 577-578, 42 U.S.C. 7151).

(b) "Atomic energy" means all forms of energy released in the course of nuclear fission or nuclear transformation.

(c) "Atomic weapon" means any device utilizing atomic energy, exclusive of the means for transporting or propelling the device (where such means is a separable and divisible part of the device), the principal purpose of which is for use as, or for development of, a weapon, a weapon prototype, or a weapon test device.

(d) "Commission" means the Nuclear Regulatory Commission or its duly authorized representatives;

(e) "Common defense and security" means the common defense and security

\*Amended 43 FR 6915.

\*\* Amended 45 FR 14199

\*\*\* Amended 45 FR 50705

November 14, 1980



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of the United States.

(f) "Government agency" means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, \* Department, or other establishment in the executive branch of the Government.

(g) "License," except where otherwise specified, means a license issued pursuant to the regulations in this part.

(h) "Person" means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the \* Department, except that the

\* Department shall be considered a person within the meaning of the regulation in this part to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244) "any State or any political subdivision of or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation or other entity, and (2) any legal successor, representative, agent, or agency of the foregoing.

(i) "Product," when used in relation to special nuclear material, means (1) to manufacture or like produce, or refine special nuclear material; (2) to separate special nuclear material from other substances in which such material may be contained; or (3) to make or to produce new special nuclear material.

(j) "Research and development," means (1) theoretical analysis, exploration, experimentation, or (2) the extension of investigative findings and

(1) \* Department facilities identified in section 202(a).

(2) Demonstration Liquid Metal Fast Breeder Reactors (as operated in part of the power generation facilities of an electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such reactor).

(3) Other demonstration nuclear reactors, except those in volume 19 January 19 1975, when operated in part of the power generation facilities of an electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such a reactor.

(4) Facilities used primarily for the receipt and storage of high-level radioactive wastes resulting from licensed activities.

(5) Recoverable Surface Storage Facilities and other facilities authorized for the express purpose of subsequent long-term storage of high-level radioactive waste generated by the \* Department which are not used for, or are part of, research and development activities.

\* Amended 45 FR 14199

theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes;

(k) "Restricted Data" means all data concerning (1) design, manufacture or utilization of atomic weapons; (2) the production of special nuclear material; or (3) the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to section 142 of the Act.

(l) "Source material" means source material as defined in section 112 of the Act and in the regulations contained in Part 40 of this chapter;

(m) "Special nuclear material" means (1) plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing but does not include source material;

(n) "United States," when used in a geographical sense, includes all territories and possessions of the United States, and Puerto Rico.

.. (o) "Agreement State" as designated in Part 150 of this chapter means any state with which the Commission has entered into an effective agreement under subsection 274b. of the Act. "Non-Agreement State" means any other State.

(p) [Deleted 40 FR 8774.]

(q) "Sealed source" means any special nuclear material that is encased in a capsule designed to prevent leakage or escape of the special nuclear material.

(r) "Plutonium processing and fuel fabrication plant" means a plant in which the following operations or activities are conducted: (1) operations for manufacture of reactor fuel containing plutonium including any of the following: (i) preparation of fuel material; (ii) formation of fuel material into desired shapes; (iii) application of protective cladding; (iv) recovery of scrap material; and (v) storage associated with such operations; or (2) research and development activities involving any of the operations described in subparagraph (1) of this paragraph, except for research and development activities utilizing unsubstantial amounts of plutonium.

† Amended 41 FR 21627.

\*\* Amended 45 FR 18905

(s) "Commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the natural environment of a site but does not include changes desirable for the temporary use of the land for public recreational uses, necessary borings to determine site characteristics or other preconstruction monitoring to establish background information related to the suitability of a site or to the protection of environmental values.

(t) "Effective kilograms of special nuclear material" means: (1) For plutonium and uranium-233, their weight in kilograms; (2) For uranium with an enrichment in the isotope U-235 of 0.01 (1%) and above, its element weight in kilograms multiplied by the square of its enrichment expressed as a decimal weight fraction; and (3) For uranium with an enrichment in the isotope U-235 below 0.01 (1%), by its element weight in kilograms multiplied by 0.0001.

(u) "Special nuclear material scrap" means the various forms of special nuclear material generated during chemical and mechanical processing, other than recycle material and normal process intermediates, which are unsuitable for use in their present form, but all or part of which will be used after further processing.

### § 70.5 Communications.

Except where otherwise specified, all communications and reports concerning the regulations in this part and applications filed under them should be addressed to the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Communications, reports, and applications may be delivered in person at the Commission's offices at 1717 H Street NW., Washington, DC, or 7920 Norfolk Avenue, Bethesda, MD.

### § 70.6 Interpretations.

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.



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†Amended 43 FR 6915.

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dance with the specifications contained in a specific license issued ‡ by an Agreement State

which authorizes manufacture of the sources for distribution to persons generally licensed by the Agreement State

(c) The general license in paragraph (a) of this section is subject to the provisions of §§ 70.32, 70.51, 70.52, 70.55, 70.56, 70.61, 70.62, and 70.71, and to the provisions of Parts 19, 20, and 21<sup>§</sup> of this chapter. In addition persons who receive title to, own, acquire, deliver, receive, possess, use or transfer one or more calibration or reference sources pursuant to this general license

(1) Shall not possess at any one time, at any one location of storage or use, more than 5 microcuries of plutonium in such sources;

(2) Shall not receive, possess, use or transfer such source unless the source, or the storage container, bears a label which includes the following statement or a substantially similar statement which contains the information called for in the following statement:

The receipt, possession, use and transfer of this source (Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_) are subject to a general license and the regulations of the United States Nuclear Regulatory Commission or of a State with which the Commission has entered into an agreement for the exercise of regulatory authority. Do not touch this label.

CAUTION—RADIOACTIVE  
MATERIAL—THIS SOURCE CONTAINS  
PLUTONIUM. DO NOT TOUCH  
RADIOACTIVE PORTION OF THIS  
SOURCE.

(Name of Manufacturer or initial transferor)\*

(3) Shall not transfer, abandon, or dispose of such source except by transfer to a person authorized by a license from the Commission or the Atomic Energy Commission or an Agreement State to receive the source.

(4) Shall store such source, except when the source is being used, in a closed container adequately designed and constructed to contain plutonium which might otherwise escape during storage.

(5) Shall not use such source for any purpose other than the calibration of radiation detectors or the standardization of other sources.

(d) The general license in paragraph (a) of this section does not authorize the manufacture, import, or export of calibration or reference sources containing plutonium.

### § 70.20 General license to own special nuclear material.

A general license is hereby issued to receive title to and own special nuclear material without regard to quantity. Notwithstanding any other provision of this chapter, a general licensee under this section is not authorized to acquire, deliver, receive, possess, use, transfer, import, or export special nuclear material, except as authorized in a specific license.

### § 70.20a General license to possess special nuclear material for transport.

(a) A general license is hereby issued to any person to possess formula quantities of strategic special nuclear material of the types and quantities subject to the requirements of §§ 73.20, 73.25, 73.26, 73.27 and 73.70(g) of Part 73 of this chapter, in the regular course of carriage for another or storage incident thereto. The general license is subject to the applicable provisions of §§ 70.32 (a) and (b), 70.42, 70.52, 70.55, 70.61, 70.62 and 70.71.

(b) Notwithstanding any other provision of this chapter, the general license issued under this section does not authorize any person to conduct any activity that would be authorized by a license issued pursuant to Parts 30 through 35, 40, 50, 110, or other sections of this part.

(c) Notwithstanding any other provision of this chapter, the duties of a general licensee under this section while in possession of formula quantities of strategic special nuclear material in the regular course of carriage for another or storage incident thereto shall be limited to providing for the physical protection of such material against theft or sabotage. Unless otherwise provided by this section, a general licensee under this section is not subject to the requirements of Parts 19, 20, 70, and 73.

(d) Any person who possesses formula quantities of strategic special nuclear material under this general license:

(1) shall have submitted and received approval of a transportation security plan. The security plan shall outline the procedures that will be used to meet the requirements of §§ 73.20, 73.25, 73.26, 73.27 and 73.70(g) of this chapter including a plan for the selection, qualification, and training of armed escorts, or the specification and design of a specially designed truck or trailer as appropriate.

(2) shall assure that the transportation is in accordance with the applicable physical protection requirements of §§ 73.20, 73.25, 73.26, 73.27 and 73.70(g) of Part 73 of this chapter and the applicable approved transportation

security plan.

(3) shall be subject to § 73.80 of Part 73 of this chapter.

\* Amended 32 FR 8124.

† Amended 42 FR 28891.

‡ Amended 43 FR 6915.

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(1) Records which must be maintained pursuant to this part may be the original or a reproduced copy or microform if such reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified by Commission regulations.

(2) If there is a conflict between the Commission's regulations in this part, license condition, or other written Commission approval or authorization pertaining to the retention period for the same type of record, the retention period specified in the regulations in this part for such records shall apply unless the Commission, pursuant to § 70.14, has granted a specific exemption from the record retention requirements specified in the regulations in this part.

after the end of the period covered by the report. The Commission may permit a licensee to submit such reports at other times when good cause is shown. In preparing and submitting the reports described in this paragraph, the licensee shall comply with the printed instructions for completing the particular form.

(2) Any licensee who is required to submit routine material status reports pursuant to § 75.35 (pertaining to implementation of the US/IAEA Safeguards Agreement) shall prepare and submit such reports only as provided in that section (instead of as provided in paragraph (a)(1) of this section).

### § 70.52 Reports of accidental criticality or loss or theft or attempted theft of special nuclear material.

(a) Each licensee shall report immediately to the appropriate NRC Regional Office listed in Appendix A of Part 73 of this chapter by telephone and telegraph, mailgram, or facsimile any case of accidental criticality and any loss, other than normal operating loss, of special nuclear material.

(b) Each licensee who possesses 1 gram or more of contained uranium-235, uranium-233, or plutonium shall report immediately to the appropriate NRC Regional Office listed in Appendix A of Part 73 of this chapter by telephone and telegraph, mailgram, or facsimile any theft or other unlawful diversion of special nuclear material which he is licensed to possess, or any incident in which an attempt has been made or is believed to have been made to commit a theft or unlawful diversion of such material in accordance with the procedures in § 73.71 of this chapter.

### § 70.53 Material status reports.

(a)(1) Each licensee who is authorized to possess at any one time and location special nuclear material in a quantity totaling more than 350 grams of contained uranium-235, uranium-233, or plutonium, or any combination thereof, shall complete and submit to the Commission (on DOE/NRC Form-742, Material Balance Report) material balance reports concerning special nuclear material received, produced, possessed, transferred, consumed, disposed of, or lost by the licensee. The licensee also shall prepare (on DOE/NRC Form-742C, Physical Inventory Listing) a statement of the composition of the ending inventory, which shall be submitted to the Commission as an attachment to each material balance report. All such reports shall be made as of March 31 and September 30 of each year and filed within thirty (30) days

(b) Each licensee subject to the requirements of § 70.51(e) shall submit a report, in accordance with paragraph (b)(1) or (b)(2) of this section, to the appropriate NRC Regional Office listed in Appendix A of Part 73 of this chapter, with a copy to the Director of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555, within 30 calendar days after the start of each ending physical inventory required by § 70.51(e)(3).

(1) If the material unaccounted for exceeded both (i) its associated limit of error and (ii) 200 grams of plutonium or U-233, 300 grams of high enriched uranium or uranium U-235 contained in high enriched uranium, or 9 000 grams of U-235 contained in low enriched uranium, a statement of the probable reasons for the material unaccounted for and actions taken or planned with respect to the material unaccounted for, and

(2) If for any material the limit of error of the material unaccounted for balance exceeds any applicable limits specified in § 70.51(e)(5) or approved pursuant to § 70.51(e)(6), a statement of the probable reasons for the limit of error and actions taken or planned with respect to the limit of error.

### § 70.54 Nuclear material transfer reports.

(a) Each licensee who transfers and each licensee who receives special nuclear material shall complete and distribute a Nuclear Material Transaction Report on DOE/NRC Form-741, in accordance with printed instructions for completing the form, whenever he transfers or receives a quantity of special nuclear material of 1 gram or more of contained uranium-235, uranium-233, or plutonium. Each licensee who receives such material from a foreign source shall complete both the supplier's and receiver's portion of DOE/NRC Form-741; perform independent tests to assure the accurate identification and measurement of the material received, including its weight and enrichment; and indicate the results of these tests on the receiver's portion of the form.

(b) Any licensee who is required to submit inventory change reports on DOE/NRC Form-741 pursuant to § 75.34 (pertaining to implementation of the US/IAEA Safeguards Agreement) shall prepare and submit such reports only as provided in that section (instead of as provided in paragraph (a) of this section).

## PART 70 • DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

### § 70.55 Inspections.

(a) Each licensee shall afford to the Commission at all reasonable times opportunity to inspect special nuclear material and the premises and facilities wherein special nuclear material is used, produced, or stored.

(b) Each licensee shall make available to the Commission for inspection, upon reasonable notice, records kept by the licensee pertaining to his receipt, possession, use,\*\* acquisition, import, export or transfer of special nuclear material.

(c)(1) In the case of fuel cycle facilities where nuclear reactor fuel is fabricated or processed each licensee shall upon request by the Director, Office of Inspection and Enforcement, provide rent-free office space for the exclusive use of Commission inspection personnel. Heat, air conditioning, light, electrical outlets and janitorial services shall be furnished by each licensee. The office shall be convenient to and have full access to the facility and, shall provide the inspector both visual and acoustic privacy.

(2) For a site with a single fuel facility licensed pursuant to Part 70, the space provided shall be adequate to accommodate a full-time inspector, a part-time secretary and transient NRC personnel and will be generally commensurate with other office facilities at the site. A space of 250 square feet either within the site's office complex or in an office trailer or other on site space is suggested as a guide. For sites containing multiple fuel facilities, additional space may be requested to accommodate additional full-time inspector(s). The office space that is provided shall be subject to the approval of the Director, Office of Inspection and Enforcement. All furniture, supplies and communication equipment will be furnished by the Commission.

(3) The licensee shall afford any NRC resident inspector assigned to that site, or other NRC inspectors identified by the Regional Director as likely to inspect the facility, immediate unfettered access, equivalent to access provided regular plant employees, following proper identification and compliance with applicable access control measures for security, radiological protection and personal safety.

### § 70.56 Tests.

Each licensee shall perform, or permit the Commission to perform, such tests as the Commission deems appropriate or necessary for the administration of the regulations in this part, including tests of (a) special nuclear material, (b) facilities wherein special nuclear material is utilized, produced or stored, (c) radiation detection and monitoring instruments, and (d) other equipment and devices used in connection with the production, utilization or storage of special nuclear material.

### § 70.57 Measurement control program for special nuclear materials control and accounting.

(a) As used in this section:

(1) "Measurement" includes sampling and means the determination of mass, volume, quantity, composition or other property of a material where such determinations are used for special nuclear material control and accounting purposes.

(2) "Measurement system" means all of the apparatus, equipment, instruments and procedures used in performing a measurement.

(3) "Reference standard" means a material, device, or instrument whose assigned value is known relative to national standards or nationally accepted measurement systems.

(4) "Traceability" means the ability to relate individual measurement results to national standards or nationally accepted measurement systems through an unbroken chain of comparisons.

(5) "Random error" refers to the

variation encountered in all measurement work, characterized by the random occurrence of both positive and negative deviations from a mean value.

(6) A "systematic error" is a constant unidirectional component of error that affects all members of a data set; its value can, in some instances, be estimated by the deviation of the mean of a measurement process from a reference value. A systematic error whose value has been determined in this manner is called a bias, whose effect can be corrected for.

(7) "Uncertainty" is the extent to which a measurement result is in doubt because of the effects of random error variances and the limits of systematic errors associated with a measurement process, after the measurements result has been corrected for bias.

(8) "Calibration" means the process of determining the numerical relationship between the observed output of a measurement system and the value, based upon reference standards, of the characteristics being measured.

(b) In accordance with § 70.58(f), each licensee who is authorized to possess at any one time and location special nuclear material in a quantity exceeding one effective kilogram and to use such special nuclear material for activities other than those involved in the operation of a nuclear reactor licensed pursuant to Part 50 of this chapter, those involved in a waste disposal operation, or as sealed sources, shall establish and maintain a measurement control program for special nuclear materials control and accounting measurements. Each program function shall be identified and assigned in the licensee organization in accordance with § 70.58(b)(2), and functional and organizational relationships shall be set forth in writing in accordance with § 70.58(b)(3). The program shall be described in a manual which shall contain the procedures, instructions, and forms prepared to meet the requirements of this paragraph, including procedures for the preparation, review, approval, and prompt dissemination of any program modifications or changes. The licensee's program shall include the following:

(1) The licensee shall assign responsibility for planning, developing, coordinating, and administering the program to an individual in his organization who has no direct responsibilities for the operation of the analytical laboratory or for the processing of material, holds a position at an organizational level which will permit independence of action and objectivity of decision and has authority to obtain all the information required to monitor and evaluate measurement quality as required by this section.

(2) Provisions shall be made for management reviews to determine the adequacy of the program and to assess the applicability of current procedures and for planned audits to verify conformance with all aspects of the program. These reviews and audits shall be performed at intervals not to exceed 12 months. Audits and reviews shall be performed by trained individuals independent of direct responsibility for the receipt, custody, utilization, measurement, measurement quality and shipment of special nuclear

\* Redesignated 25 FR 12730.

\*\* Amended 32 FR 2562.



UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS -- ENERGY

**PART  
72**

**LICENSING REQUIREMENTS FOR THE STORAGE OF SPENT FUEL  
IN AN INDEPENDENT FUEL SPENT STORAGE INSTALLATION**

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- 72.91 Operator requirements  
72.92 Operator training and certification program.  
72.93 Physical requirements.

**Authority.** The provisions of this Part 72 are issued under the Atomic Energy Act of 1954, as amended, secs. 51, 53 as amended, 57 as amended, 62, 63, 65, 69, 81 as amended, 161b, h, i, o, 182a as amended, 183 as amended, 184 as amended, 186, 187, Pub. L. 83-703, 68 Stat. 929, 930 as amended by 71 Stat. 576, 72 Stat. 632 and 79 Stat. 602, 932 as amended by 78 Stat. 605 and 88 Stat. 475, 933, 934, 935 as amended by 88 Stat. 475 and 92 Stat. 3039, 948, 953 as amended by 70 Stat. 1069, 954 as amended by 78 Stat. 602, 955 (42 U.S.C. 2071, 2073, 2077, 2082, 2093, 2095, 2099, 2111, 2201(b), (h), (i), (o), 2232, 2233, 2234, 2236, 2237); sec. 234, Pub. L. 91-161, 83 Stat. 444 (42 U.S.C. 2282); sec. 274c, as amended,

Pub. L. 86-273, 73 Stat. 688 as amended by Pub. L. 95-604, 92 Stat. 3036 (42 U.S.C. 2021(c)); under sec. 102(2)(C) of the National Environmental Policy Act of 1969, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332) and under the Energy Reorganization Act of 1974, as amended, sec. 201, as amended, 202, and 206, Pub. L. 93-438, 88 Stat. 1242, as amended by 89 Stat. 413, 1243, 1246 (42 U.S.C. 5841, 5842, 5846).

**Subpart A—General Provisions**

**§ 72.1 Purpose.**

The regulations in this part establish requirements, procedures, and criteria for the issuance of licenses to possess power reactor spent fuel and other radioactive materials associated with spent fuel storage, in an independent spent fuel storage installation (ISFSI), and the terms and conditions under which the Commission will issue such licenses.

**§ 72.2 Scope.**

(a) Licenses issued under this Part are limited to the possession of power reactor spent fuel to be stored in a complex that is designed and constructed specifically for the temporary storage of power reactor spent fuel aged for at least one year, and to the possession of other radioactive materials associated with spent fuel storage.

(b) The regulations in this part apply to all persons in the United States, including persons in Agreement States.

(c) The requirements of this regulation are applicable, as appropriate, to both wet and dry modes of storage of spent fuel.

(d) Licenses covering the storage of spent fuel in an existing spent fuel storage facility shall be issued in accordance with the requirements of this part as stated in § 72.31.



## PART 72 • LICENSING REQUIREMENTS FOR THE STORAGE OF SPENT FUEL .....

### § 72.3 Definitions.

As used in this part: (a) "Act" means the Atomic Energy Act of 1954 (68 Stat. 919) including any amendments thereto.

(b) "As low as is reasonably achievable" (ALARA) means as low as is reasonably achievable taking into account the state of technology, and the economics of improvements in relation to (1) benefits to the public health and safety, (2) other societal and socioeconomic considerations, and (3) the utilization of atomic energy in the public interest.

(c) "Atomic energy" means all forms of energy released in the course of nuclear fission or nuclear transformation.

(d) "Byproduct material" means any radioactive material (except special nuclear material) yielded in, or made radioactive by exposure to, the radiation incident to the process of producing or utilizing special nuclear material.

(e) "Commission" means the Nuclear Regulatory Commission or its duly authorized representatives.

(f) "Commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the natural environment of a site, but does not mean:

(1) Changes desirable for the temporary use of the land for public recreational uses, necessary borings or excavations to determine subsurface materials and foundation conditions, or other preconstruction monitoring to establish background information related to the suitability of the site or to the protection of environmental values;

(2) Construction of environmental monitoring facilities;

(3) Procurement of manufacture of components of the installation; or

(4) Construction of means of access to the site as may be necessary to accomplish the objectives of sections (1) and (2) above.

(g) "Confinement systems" means those systems, including ventilation, that act as barriers between areas containing radioactive substances and the environment.

(h) "Controlled area" means that area immediately surrounding an ISFSI for which the licensee exercises authority over its use and within which ISFSI operations are performed.

(i) "Design bases" means that information that identifies the specific functions to be performed by a structure, system, or component of a facility and the specific values or ranges of values chosen for controlling parameters as reference bounds for design. These values may be restraints derived from generally accepted "state-of-the-art" practices for achieving functional goals

or requirements derived from analysis (based on calculation or experiments) of the effects of a postulated event under which a structure, system, or component must meet its functional goals. The values for controlling parameters for external events include: (1) estimates of severe natural events to be used for deriving design bases that will be based on consideration of historical data on the associated parameters, physical data, or analysis of upper limits of the physical processes involved and (2) estimates of severe external man-induced events to be used for deriving design bases that will be based on analysis of human activity in the region taking into account the site characteristics and the risks associated with the event.

(j) "Design capacity" means the quantity in metric tons of spent fuel, its maximum burnup in MWD/MTU, and the total heat generation in Btu per hour that an ISFSI is designed to accommodate.

(k) "Floodplain" means the lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands. Areas subject to a one percent or greater chance of flooding in any given year are included.

(l) "Historical data" means a compilation of the available published and unpublished information concerning a particular type of event.

(m) "Independent spent fuel storage installation" (ISFSI) means a complex designed and constructed for the storage of spent fuel and other radioactive materials associated with spent fuel storage. An ISFSI which is located on the site of another facility may share common utilities and services with such a facility and be physically connected with such other facility and still be considered to be independent, *provided* that such sharing of utilities and services or physical connections does not (i) increase the probability or consequences of an accident or malfunction of components, structures or systems that are important to safety; or (ii) reduce the margin of safety as defined in the basis for any technical specifications of either facility."

(n) "ISFSI-emergency planning zone" (ISFSI-EPZ) means that area in the vicinity of an ISFSI within which protective action measures may be needed in the event of an accident at an ISFSI.

(o) "NEPA" means the National Environmental Policy Act of 1969 including any amendments thereto.

(p) "Person" means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government

agency other than the Nuclear Regulatory Commission or the Department of Energy (DOE), except that the DOE shall be considered a person within the meaning of the regulations in this part to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission pursuant to Section 202 of the Energy

Reorganization Act of 1974 (88 Stat.

1244); (2) any State; any political subdivision of a state, or any political entity within a State, (3) any foreign government or nation, or any political subdivision of any such government or nation, or other entity; and (4) any legal successor, representative, agent, or agency of the foregoing.

(q) "Population" means the people that may be affected by the change in environmental conditions due to the construction, operation, or decommissioning of an ISFSI.

(r) "Region" means the geographical area surrounding and including the site, which is large enough to contain (1) all the features related to a phenomenon or to a particular event that could potentially impact the safety of the ISFSI and (2) all measurable effects of environmental impact, both radiological and nonradiological, that are due to the construction, operation or decommissioning of an ISFSI.

(s) "Site" means the real property on which the ISFSI is located.

(t) "Source material" means (1) uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores that contain by weight one-twentieth of one percent (0.05%) or more of (i) uranium, (ii) thorium, or (iii) any combination thereof. Source material does not include special nuclear material.

(u) "Special nuclear material" means (1) plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing but does not include source material.

(v) "Spent fuel" as used in this Part means irradiated nuclear fuel that has undergone at least one year's decay since being used as a source of energy in a power reactor. Spent fuel includes the

special nuclear material, byproduct material, source material, and other radioactive materials associated with fuel assemblies.

(w) "Structures, systems, and components important to safety" means those features of the ISFSI whose function is (1) to maintain the conditions

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required to store spent fuel safely, (2) to prevent damage to the spent fuel during handling and storage, or (3) to provide reasonable assurance that spent fuel can be received, handled, stored and retrieved without undue risk to the health and safety of the public.

(x) "Temporary storage" means the interim storage, protection, and safeguarding of spent fuel and radioactive materials associated with spent fuel storage, for a limited time only, pending its ultimate disposal.

### § 72.4 Communications.

Except where otherwise specified, all communications and reports concerning the regulations in this Part and applications filed under them should be addressed to The Nuclear Regulatory Commission, Office of Nuclear Materials Safety and Safeguards, Division of Fuel Cycle and Material Safety, Washington, D.C. 20555. Communications, reports, and applications may be delivered in person at the Commission's Offices at 7915 Eastern Avenue, Silver Spring, Maryland, or at 1717 H Street, N.W., Washington, D.C.

### § 72.5 Interpretations.

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by an officer or employee of the Commission, other than a written interpretation by the General Counsel, will be recognized to be binding upon the Commission.

### § 72.6 License required; types of licenses.

(a) Licenses for spent fuel are of two types: general and specific. Any general license provided in this part is effective without the filing of applications with the Commission or the issuance of licensing documents to particular persons. Specific licenses are issued to named persons upon applications filed pursuant to the regulations in this part.

(b) A general license is hereby issued to receive title to and own spent fuel without regard to quantity.

(c) No person may acquire, receive, or possess spent fuel or radioactive material associated with spent fuel for the purpose of storage in an independent spent fuel storage installation except as authorized in a specific license issued by the Commission in accordance with the regulations in this part.

### § 72.7 Specific exemptions.

The Commission may, upon application by any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this Part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

### § 72.8 Denial of licensing by agreement states.

Agreement States may not issue licenses covering the storage of spent fuel in an ISFSI.

### Subpart B—License Application, Form, Contents

#### § 72.11 Filing of applications for specific licenses; oath or affirmation.

(a) *Place of filing.* Each application for a license, or amendment thereof, under this Part should be filed with the Director, Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

Applications, communications, reports and correspondence may also be delivered in person at the Commission's offices at 7915 Eastern Avenue, Silver Spring, Maryland, or at 1717 H Street, N.W., Washington, D.C.

(b) *Oath or affirmation.* Each application for a license or license amendment (including amendments to such applications) shall be executed in an original signed by the applicant or duly authorized officer thereof under oath or affirmation.

(c) *Number of copies of applications.* Each filing of an application for a license or license amendment under this Part (including amendments to such applications) shall include, in addition to the signed originals, the documents listed in § 72.21.

(d) *Fees.* The application, amendment, and renewal fees applicable to a license covering the storage of spent fuel in an ISFSI are those shown in § 170.31 of this chapter.

#### § 72.12 Elimination of repetition.

In any application under this part, the applicant may incorporate by reference information contained in previous applications, statements, or reports filed with the Commission: *Provided*, that such references are clear and specific.

#### § 72.13 Public inspection of applications.

Applications and documents submitted to the Commission in connection with applications may be made available for public inspection in accordance with provisions of the

regulations contained in Part 2 and Part 9 of this chapter.

#### § 72.14 Contents of application: General and financial information.

Each application shall state:

- (a) Full name of applicant;
- (b) Address of applicant;
- (c) Description of business or occupation of applicant;
- (d) If applicant is: (1) an individual: citizenship and age;
- (2) a partnership: name, citizenship, and address of each partner and the principal location at which the partnership does business;
- (3) a corporation or an unincorporated association:
  - (i) the State in which it is incorporated or organized and the principal location at which it does business; and
  - (ii) the names, addresses, and citizenship of its directors and principal officers; or
- (4) acting as an agent or representative of another person in filing the application: the identification of the principal and the information required under this paragraph with respect to such principal.

(e) Information sufficient to demonstrate to the Commission the financial qualifications of the applicant to carry out, in accordance with the regulations in this chapter, the activities for which the license is sought. This information shall state the place at which the activity is to be performed, the general plan for carrying out the activity, and the period of time for which the license is requested. The information shall show that the applicant either possesses the necessary funds, or that the applicant has reasonable assurance of obtaining the necessary funds; or that by a combination of the two, the applicant will have the necessary funds available to cover the following:

- (1) Estimated construction costs;
- (2) Estimated operating costs over the planned life of the ISFSI complex; and
- (3) Estimated shutdown and decommissioning costs, and the necessary financial arrangements to provide reasonable assurance prior to licensing that shutdown, decontamination, and decommissioning will be carried out after the removal of spent fuel from storage.

#### § 72.15 Contents of application: Technical information.

(a) Each application for a license under this part shall include a Safety Analysis Report describing the proposed ISFSI for the storage of spent fuel, including how the ISFSI will be operated. The minimum information to

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be included in this report shall consist of the following:

(1) A description and safety assessment of the site on which the ISFSI is to be located, with appropriate attention to the design bases for external events. Such assessment shall contain an analysis and evaluation of the major structures, systems, and components of the ISFSI that bear on the suitability of the site when the ISFSI is operated at its design capacity. If the proposed ISFSI is to be located on the site of a nuclear power plant or other licensed facility, the potential interactions between the ISFSI and such other facility shall be evaluated.

(2) A description and discussion of the ISFSI structures with special attention to design and operating characteristics, unusual or novel design features, and principal safety considerations.

(3) The design of the ISFSI in sufficient detail to support the findings in § 72.31, including:

(i) The design criteria for the ISFSI pursuant to Subpart F of this Part, with identification and justification for any additions to or departures from the general design criteria;

(ii) The design bases and the relation of the design bases to the design criteria;

(iii) Information relative to materials of construction, general arrangement, dimensions or principal structures, and descriptions of all structures, systems, and components important to safety, in sufficient detail to support a finding that the ISFSI will satisfy the design bases with an adequate margin for safety; and

(iv) Applicable codes and standards.

(4) An analysis and evaluation of the design and performance of structures, systems, and components important to safety, with the objective of assessing the impact on public health and safety resulting from operation of the ISFSI and including determination of:

(i) the margins of safety during normal operations and expected operational occurrences during the life of the ISFSI; and

(ii) the adequacy of structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents, including natural and man-made phenomena and events.

(5) The means for controlling and limiting occupational radiation exposures within the limits given in Part 20 of this chapter, and for meeting the objective of exposures as low as is reasonably achievable.

(6) The features of ISFSI design and operating modes to maintain low waste volumes.

(7) An identification and justification for the selection of those subjects that

will be probable license conditions and technical specifications. Such subjects shall cover the design, construction, operation, and decommissioning of the ISFSI.

(8) A plan for the conduct of operations, including the planned managerial and administrative controls system, and the applicant's organization, and program for training of personnel pursuant to Subpart I of this Part.

(9) If the proposed ISFSI incorporates structures, systems, or components important to safety whose functional adequacy or reliability have not been demonstrated by prior use for that purpose or cannot be demonstrated by reference to performance data in related applications or to widely accepted engineering principles—an identification of such structures, systems, or components along with a schedule showing how such safety questions will be resolved prior to the initial receipt of spent fuel for storage at the ISFSI.

(10) The technical qualifications of the applicant to engage in the proposed activities, as required by § 72.17 of this Part.

(11) A description of the applicant's plans for coping with emergencies, as required by § 72.19 of this part.

(12) A description of the equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal operations and expected operational occurrences. The description shall identify the design objectives and the means to be used for keeping levels of radioactive material in effluents to the environment as low as is reasonably achievable and within the exposure limits stated in § 72.67 of this part. The description shall include:

(i) An estimate of the quantity of each of the principal radionuclides expected to be released annually to the environment in liquid and gaseous effluents produced during normal ISFSI operations; and prior to the first receipt of spent fuel, a second estimate confirming the original estimate or, if the expected releases and exposures are significantly different from the original estimate;

(ii) A description of the equipment and processes used in radioactive waste systems; and

(iii) A general description of the provisions for packaging, storage, and disposal of solid wastes containing radioactive materials resulting from treatment of gaseous and liquid effluents and from other sources.

(13) An analysis of the potential dose or dose commitment to an individual outside the controlled area from

accidents or natural phenomena events that result in the release of radioactive material to the environment or direct radiation from the ISFSI. The calculations of individual dose or dose commitment shall be performed for direct exposure, inhalation, and ingestion occurring as a result of the postulated design basis event.

(14) A description of the quality assurance program to be applied to the design, fabrication, construction, testing, and operation of the structures, systems, and components of the ISFSI important to safety, as required by § 72.80. The description of the quality assurance program shall identify structures, systems and components important to safety and shall show how the criteria in Appendix B to Part 50 of this chapter will be applied to those safety-related components, systems, and structures in a manner consistent with their importance to safety.

(15) A description for the detailed security measures for physical protection, including design features and the plans required by Subpart H of this Part.

(16) A description of the program covering preoperational testing and initial operations.

(17) A description of the decommissioning plan required under § 72.18 of this Part.

### § 72.16 Contents of application: Technical specifications.

Each application under this Part shall include proposed technical specifications in accordance with the requirements of § 72.33 and a summary statement of the bases and justifications for these technical specifications.

### § 72.17 Contents of application: Applicant's technical qualifications.

Each application under this Part shall include: (a) The technical qualifications, including training and experience, of the applicant to engage in the proposed activities.

(b) A description of the personnel training program required under Subpart I of this Part.

(c) A description of the applicants' operating organization, delegations of responsibility and authority, and the minimum skills and experience qualifications relevant to the various levels of responsibility and authority.

(d) A commitment by the applicant to have and maintain an adequate complement of trained and certified plant personnel prior to the receipt of spent fuel for storage.

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### § 72.18 Decommissioning plan, including financing.

(a) Each application under this part shall include a proposed decommissioning plan that contains sufficient information on proposed practices and procedures for the decontamination of the site and facilities and for disposal of residual radioactive materials after all spent fuel has been removed, in order to provide reasonable assurance that the decontamination and decommissioning of the ISFSI at the end of its useful life will provide adequate protection to the health and safety of the public. This plan shall identify and discuss those design features of the ISFSI that facilitate its decontamination and decommissioning at the end of its useful life.

(b) The decommissioning plan shall include the financial arrangements made by the applicant to provide reasonable assurance that the planned decontamination and decommissioning of the ISFSI will be carried out.

### § 72.19 Emergency plan.

An application to store spent fuel in an ISFSI shall include plans for coping with emergencies. These plans shall contain the elements that are listed in Section IV, "Content of Emergency Plans," of Appendix E to Part 50 of this chapter.

### § 72.20 Environmental report.

Each application for a license under this part shall be accompanied by an Environmental Report which meets the requirements of Part 51 of this chapter.

### § 72.21 Required licensing documents.

| Section  | Document                                           | No. of copies | Signed originals |
|----------|----------------------------------------------------|---------------|------------------|
| 72.14    | License Application                                | 25            | 3                |
| 72.15    | Safety Analysis Report *                           | 70            |                  |
| 72.18    | Decommissioning Plan *                             | 25            |                  |
| 72.19    | Emergency Plan *                                   | 25            |                  |
| 72.20    | Environmental Report *                             | 150           |                  |
| 72.35(b) | Report of ISFSI Design and Procedures Changes      | 25            | 3                |
| 72.36(b) | Application for Transfer of License                | 25            | 3                |
| 72.38    | Application for Termination of License             | 25            | 3                |
| 72.39    | Amendment to License                               | 25            | 3                |
| 72.80    | Quality Assurance Program *                        | 25            |                  |
| 72.81    | Physical Security Plan *                           | 10            |                  |
| 72.82    | Design for Physical Protection *                   | 10            |                  |
| 72.83    | Safeguards Contingency Plan *                      | 10            |                  |
| 72.84    | Changes to Physical Security and Contingency Plans | 10            |                  |

| Section | Document                     | No. of copies | Signed originals |
|---------|------------------------------|---------------|------------------|
| 72.92   | Personnel Training Program * | 25            |                  |

\* Submitted with license application  
\* Physical protection plans will be withheld from public disclosure by the NRC.

### Subpart C—Issuance and Conditions of Licenses

#### § 72.31 Issuance of licenses.

(a) Except as provided in paragraph (c) of this section, the Commission will issue a license under this Part upon a determination that the application for a license meets the standards and requirements of the Act and the regulations of the Commission, and upon finding that:

(1) The applicant's proposed ISFSI design complies with Subpart F of this part;

(2) The proposed site complies with the criteria in Subpart E of this Part;

(3) If on the site of a nuclear power plant or other licensed activity or facility, the proposed ISFSI would not pose an undue risk to the safe operation of such nuclear power plant or other licensed activity or facility;

(4) The applicant is qualified by reason of training and experience to conduct the operation covered by the regulations in this Part;

(5) The applicant's proposed operating procedures to protect health and to minimize danger to life or property are adequate;

(6) The applicant is financially qualified to engage in the proposed activities in accordance with the regulations in this Part;

(7) The applicant's quality assurance plan complies with Subpart G of this Part;

(8) The applicant's physical protection provisions comply with Subpart H of this Part;

(9) The applicant's personnel training program complies with Subpart I of this Part;

(10) The applicant's decommissioning plan and its financing pursuant to § 72.18 of this Part provide reasonable assurance that the decontamination and decommissioning of the ISFSI at the end of its useful life will provide adequate protection to the health and safety of the public;

(11) The applicant's emergency plan complies with § 72.19 of this Part;

(12) The applicable provisions of Part 170 of this chapter have been satisfied;

(13) There is reasonable assurance that (i) the activities authorized by the license can be conducted without endangering the health and safety of the

public and (ii) such activities will be conducted in compliance with the applicable regulations of this Chapter; and

(14) The issuance of the license will not be inimical to the common defense and security.

(b) Grounds for denial for a license to store spent fuel in the proposed ISFSI may be commencement of construction prior to a conclusion or finding by the Director of the Office of Nuclear Materials Safety and Safeguards or his designee or after a public hearing, the Presiding Office, Atomic Safety and Licensing Board, or the Commission acting as a collegial body, as appropriate, on the basis of information filed and evaluations made pursuant to Part 51 of this chapter, and after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license with any appropriate conditions to protect environmental values.

(c) For facilities that have been covered under previous licensing actions including the issuance of a Construction Permit under Part 50 of this chapter, a reevaluation of the site is not required except where new information is discovered which could alter the original site evaluation findings. In this case, the site evaluation factors involved will be reevaluated.

#### § 72.32 Duration of license; renewal.

(a) Each license issued under this Part shall be for a fixed period of time to be specified in the license but not to exceed 20 years from the date of issuance. Licenses may be renewed by the Commission at the expiration of that period upon application of the licensee.

(b) Applications for renewal of a license should be filed in accordance with the applicable provisions of Subpart B of this Part at least two years prior to the expiration of the existing license. Information contained in previous applications, statements, or reports filed with the Commission under the license may be incorporated by reference: *Provided*, that such references are clear and specific.

(c) In any case in which a licensee, not less than 2 years prior to expiration of his existing license, has filed an application in proper form for renewal of a license, such existing license shall not expire until a final decision concerning the application for renewal has been made by the Commission.



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### § 72.33 License conditions.

(a) Each license issued under this part shall include license conditions. The license conditions may be derived from the analyses and evaluations included in the safety analysis report and amendments thereto submitted pursuant to § 72.15 of this part. License conditions pertain to design, construction and operation. The Commission may also include such additional license conditions as it finds appropriate.

(b) Every license issued under this Part shall be subject to the following conditions, even if they are not explicitly stated therein:

(1) Neither the license nor any right thereunder shall be transferred, assigned, or disposed of in any manner, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission shall, after securing full information, find that the transfer is in accordance with the provisions of the Atomic Energy Act and give its consent in writing.

(2) The license shall be subject to revocation, suspension, modification, or amendment in accordance with the procedures provided by the Atomic Energy Act and Commission regulations.

(3) Upon request of the Commission, the licensee shall, at any time before expiration of the license, submit written statements, signed under oath or affirmation, to enable the Commission to determine whether or not the license should be modified, suspended, or revoked.

(4) Prior to the receipt of spent fuel for storage at an ISFSI, the licensee shall have in effect an NRC-approved program covering the training and certification of ISFSI personnel that meets the requirements of Subpart I of this Part.

(5) The licensee shall permit the operation of the safety-related equipment and controls of the ISFSI only by personnel whom the licensee has certified as being adequately trained to perform such operations, or by uncertified personnel who are under the direct visual supervision of a certified individual.

(c) Technical specifications submitted pursuant to § 72.16 of this Part shall include requirements in the following categories:

(1) Functional and operating limits and monitoring instruments and limiting control settings. (i) Functional and operating limits for an ISFSI are limits on fuel handling and storage conditions that are found to be necessary to protect the integrity of the stored fuel, to protect employees against occupational exposures and to guard against the

uncontrolled release of radioactive materials. (ii) Monitoring instruments and limiting control settings for an ISFSI are those related to fuel handling and storage conditions having significant safety functions.

(2) Limiting conditions. Limiting conditions are the lowest functional capability or performance levels of equipment required for safe operation.

(3) Surveillance requirements. Surveillance requirements include: (i) inspections of spent fuel in storage and monitoring; (ii) inspection, test and calibration activities to ensure that the necessary integrity of required systems, components and the spent fuel in storage is maintained; (iii) confirmation that operation of the ISFSI is within the required functional and operating limits; and (iv) a confirmation that the limiting conditions required for safe storage are met.

(4) Design features. Design features include items that would have a significant effect on safety if altered or modified, such as materials of construction and geometric arrangements.

(5) Administrative controls. Administrative controls include the organization and management procedures, recordkeeping, review and audit, and reporting necessary to assure that the operations involved in the storage of spent fuel in an ISFSI are performed in a safe manner.

(d) Each license authorizing the storage of spent fuels under this Part shall include technical specifications that, in addition to stating the limits on the release of radioactive materials for compliance with limits of Part 20 of this chapter and the "as low as is reasonably achievable objectives" for effluents, require that:

(1) Operating procedures for control of effluents be established and followed, and equipment in the radioactive waste treatment systems be maintained and used, to meet the requirements of § 72.67 of this Part;

(2) An environmental monitoring program be established to ensure compliance with the technical specifications for effluents; and

(3) An annual report be submitted to the appropriate regional office specified in Appendix D of Part 20 of this Chapter, with a copy to the Director, Office of Nuclear Material Safety and Safeguards, within 60 days after January 1 of each year, specifying the quantity of each of the principal radionuclides released to the environment in liquid and in gaseous effluents during the previous 12 months of operation and such other information as may be required by the Commission to estimate maximum potential radiation

dose commitment to the public resulting from effluent releases. On the basis of such reports and any additional information the Commission may obtain from the licensee or others, the Commission may from time to time require the licensee to take such action as the Commission deems appropriate.

(e) The licensee shall make no change that would decrease the effectiveness of the physical security plan prepared pursuant to § 72.81 of this Part without the prior approval of the Commission. A licensee desiring to make such a change shall submit an application for an amendment to the license pursuant to § 72.39 of this Part. A licensee may make changes to the physical security plan without prior Commission approval, provided that such changes do not decrease the effectiveness of the plan. The licensee shall furnish to the Commission a report containing a description of each change within two months after the change is made, and shall maintain records of changes to the plan made without prior Commission approval for a period of two years from the date of the change.

(f) A licensee shall follow and maintain in effect an emergency plan that is approved by the Commission. The licensee may make changes to the approved plan without Commission approval only if such changes do not decrease the effectiveness of the plan, and if the plan, as changed, continues to contain the elements of Section IV of Appendix E of 10 CFR Part 50. Within six months after any such change is made, the licensee shall submit a report containing a description of any changes made in the plan to the appropriate NRC regional office specified in Appendix D to Part 20 of this chapter with a copy to the Director, Office of Nuclear Material Safety and Safeguards. Proposed changes that decrease the effectiveness of the approved emergency plan shall not be implemented unless the licensee has received prior approval of such changes from the Commission.

### § 72.34 Public hearings.

(a) In connection with each application for a license or an amendment to a license under this Part, the Commission shall issue or cause to be issued a notice of hearing in accordance with § 2.104, or a notice of proposed action in accordance with § 2.105, of this chapter, as appropriate. Except as provided in paragraph (b) of this section, a hearing may not be held until after 30 days' notice and publication once in the **Federal Register**.

(b) In the absence of a request for hearing by any person whose interest may be affected, the Commission may



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issue a license or an amendment to a license without a hearing upon 30 days notice and publication once in the **Federal Register** of its intent to do so. The Commission may dispense with such 30 days' notice and publication with respect to an application for an amendment to a license issued under this Part upon a determination by the Commission that the amendment does not involve a significant hazards consideration or an unreviewed safety question.

### § 72.35 Changes, tests and experiments.

(a)(1) The holder of a license issued under this Part may, without prior Commission approval unless the proposed change, test or experiment involves a change in the license conditions incorporated in the license, an unreviewed safety question, significant increase in occupational exposure or a significant unreviewed environmental impact: (i) make changes in the ISFSI described in the Safety Analysis Report, (ii) make changes in the procedures described in the Safety Analysis Report, or (iii) conduct tests or experiments not described in the Safety Analysis Report.

(2) A proposed change, test, or experiment shall be deemed to involve an unreviewed safety question (i) if the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report may be increased; (ii) if a possibility for an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report may be created; or (iii) if the margin of safety as defined in the basis for any technical specification is reduced.

(b)(1) The licensee shall maintain records of changes in the ISFSI and of changes in procedures made pursuant to this section if such changes constitute changes in the ISFSI or procedures described in the Safety Analysis Report. The licensee shall also maintain records of tests and experiments carried out pursuant to paragraph (a) of this section. These records shall include a written safety evaluation that provides the bases for the determination that the change, test, or experiment does not involve an unreviewed safety question. The records of changes in the ISFSI and of changes in procedures and records of tests shall be maintained for the lifetime of the ISFSI.

(2) Annually, or at such shorter interval as may be specified in the license, the licensee shall furnish to the appropriate regional office, specified in Appendix D of Part 20 of this chapter,

with a copy to the Director, Office of Nuclear Material and Safeguards, a report containing a brief description of such changes, tests, and experiments, including a summary of the safety evaluation of each. Any report submitted by a licensee pursuant to this paragraph will be made a part of the public record pertaining to this license.

(c) The holder of a license issued under this Part who desires (1) to change the license conditions, (2) to change the ISFSI or the procedures described in the Safety Analysis Report, or (3) to conduct tests or experiments not described in the Safety Analysis Report that involve an unreviewed safety question, a significant increase in occupational exposure, or significant unreviewed environmental impact, shall submit an application for amendment of the license, pursuant to § 72.39 of this Part.

### § 72.36 Transfer of licenses.

(a) No license or any right included in a license issued under this Part shall be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission gives its consent in writing.

(b)(1) An application for transfer of a license shall include as much of the information described in §§ 72.14 and 72.17 of this Part with respect to the identity and the technical and financial qualifications of the proposed transferee as would be required by those sections if the application were for an initial license. The application shall also include a statement of the purposes for which the transfer of the license is requested and the nature of the transaction necessitating or making desirable the transfer of the license.

(2) The Commission may require any person who submits an application for the transfer of a license pursuant to the provisions of this section to file a written consent from the existing licensee, or a certified copy of an order or judgment of a court of competent jurisdiction, attesting to the person's right—subject to the licensing requirements of the Act and these regulations—to possession of the spent fuel and the ISFSI involved.

(c) After appropriate notice to interested persons, including the existing licensee, and observance of such procedures as may be required by the Act or regulations or orders of the Commission, the Commission will approve an application for the transfer of a license, if the Commission determines:

(1) That the proposed transferee is qualified to be the holder of the license; and

(2) That transfer of the license is consistent with applicable provisions of the law, and the regulations and orders issued by the Commission pursuant thereto.

### § 72.37 Creditor regulations.

(a) Pursuant to section 184 of the Act, the Commission consents, without individual application, to the creation of any mortgage, pledge, or other lien on special nuclear material contained in spent fuel not owned by the United States that is the subject of a license or on any interest in such special nuclear material in spent fuel: *Provided:*

(1) That the rights of any creditor so secured may be exercised only in compliance with and subject to the same requirements and restrictions as would apply to the licensee pursuant to the provisions of the license, the Atomic Energy Act of 1954, as amended, and regulations issued by the Commission pursuant to said Act; and

(2) That no creditor so secured may take possession of the spent fuel pursuant to the provisions of this section prior to either the issuance of a license from the Commission authorizing such possession or the transfer of the license.

(b) Any creditor so secured may apply for transfer of the license covering such spent fuel by filing an application for transfer of the license pursuant to § 72.36(b). The Commission will act upon such application pursuant to § 72.36(c).

(c) Nothing contained in this regulation shall be deemed to affect the means of acquiring, or the priority of, any tax lien or other lien provided by law.

(d) As used in this section, "creditor" includes, without implied limitation, the trustee under any mortgage, pledge, or lien on spent fuel in storage made to secure any creditor; any trustee or receiver of such spent fuel appointed by a court of competent jurisdiction in any action brought for the benefit of any creditor secured by such mortgage, pledge, or lien; any purchaser of such spent fuel at the sale thereof upon foreclosure of such mortgage, pledge, or lien or upon exercise of any power of sale contained therein; or any assignee of any such purchaser.

### § 72.38 Applications for termination of licenses.

(a) The licensee shall apply to the Commission for authority to surrender a license voluntarily and to decommission the ISFSI and dispose of the materials stored therein. The Commission may

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require information, including information as to proposed procedures for the disposal of radioactive material and decontamination of the site, to determine whether there is reasonable assurance that the decommissioning and disposal will be performed in accordance with the regulations in this chapter and will not be inimical to the common defense and security or to the health and safety of the public.

(b) Upon a finding of reasonable assurance that the decommissioning of ISFSI and disposal of the materials stored therein will be performed in accordance with the regulations in this chapter and will provide adequate protection to the health and safety of the public, and after notice to interested persons, the Commission will authorize such decommissioning and disposal and terminate the license upon completion of such procedures in accordance with any conditions specified in the authorization.

### § 72.39 Application for amendment of license.

Whenever a holder of a license desires to amend the license, an application for an amendment shall be filed with the Commission fully describing the changes desired and the reasons for such changes, and following as far as applicable the form prescribed for original applications.

### § 72.40 Issuance of amendment.

In determining whether an amendment to a license will be issued to the applicant, the Commission will be guided by the considerations that govern the issuance of initial licenses.

### § 72.41 Modification, revocation, and suspension of licenses.

(a) The terms and conditions of all licenses are subject to amendment, revision, or modification by reason of amendments to the Atomic Energy Act of 1954, or by reason of rules, regulations, or orders issued in accordance with the Act or any amendments thereto.

(b) Any license may be modified, revoked, or suspended in whole or in part for any of the following: (i) for any material false statement in the application or in any statement of fact required under Section 182 of the Act; (ii) conditions revealed by such application or statement of fact or any report, record, inspection or other means which would warrant the Commission to refuse to grant a license on an original application; (iii) failure to operate an ISFSI in accordance with the terms of the license; (iv) violation of, or failure to observe any of, the terms and conditions of the Act, or of any applicable

regulation, license, or order of the Commission.

(c) Upon revocation of a license, the Commission may immediately cause the retaking of possession of all special nuclear material contained in spent fuel held by the licensee. In cases found by the Commission to be of extreme importance to the national defense and security or to the health and safety of the public, the Commission prior to following any of the procedures provided under sections 551-558 of title 5 of the United States Code, may cause the taking of possession of any special nuclear material contained in spent fuel held by the licensee.

### § 72.42 Backfitting.

(a) The Commission may require the backfitting of an ISFSI if it finds that such action will provide substantial additional protection to the environment, or occupational or public health and safety. As used in this section, "backfitting" means the addition, elimination, or modification of structures, systems, or components of an ISFSI after the license has been issued.

(b) The Commission may at any time require a holder of a license to submit such information concerning the backfitting or the proposed backfitting of the ISFSI as it deems appropriate.

### Subpart D—Records, Reports, Inspections, and Enforcement

### § 72.50 Safety analysis report updating.

(a) The design, description of planned operations, and other information submitted in the Safety Analysis Report shall be updated by the licensee and submitted to the Commission at least once every six months after issuance of the license during final design and construction, until preoccupational testing is completed, with final completion and submittal to the Commission at least 90 days prior to the planned receipt of spent fuel. This final submittal shall include a final analysis and evaluation of the design and performance of structures, systems, and components that are important to safety taking into account any pertinent information developed since the submittal of the license application. Changes affecting safety margins will require Commission approval prior to the receipt of spent fuel.

(b) After the first receipt of spent fuel for storage, the Safety Analysis Report shall be updated annually and submitted to the Commission by the licensee. This submittal shall include the following:

(1) New or revised information relating to applicable site evaluation

factors, including the results of environmental monitoring programs.

(2) A description and analysis of changes in the structures, systems, and components of the ISFSI, with emphasis upon (i) performance requirements, (ii) the bases, with technical justification therefor, upon which such requirements have been established, and (iii) evaluations showing that safety functions will be accomplished.

(3) An analysis of the significance of any changes to codes, standards, regulations, or regulatory guides which the licensee has committed to meeting the requirements that are applicable to the design, construction, or operation of the ISFSI.

### § 72.51 Material balance, inventory, and records requirements for stored materials.

(a) Each licensee shall keep records showing the receipt, inventory (including location), disposal, acquisition, and transfer of all spent fuel in storage.

(b) Each licensee shall conduct a physical inventory of all spent fuel in storage at intervals not to exceed twelve months unless otherwise directed by the Commission.

(c) Each licensee shall establish, maintain, and follow written material control and accounting procedures that are sufficient to enable the licensee to account for the spent fuel in storage.

(d) Records of spent fuel in storage shall be kept in duplicate. The duplicate set of records shall be kept at a separate location sufficiently remote from the original records that a single event would not destroy both sets of records. Records of spent fuel transferred out of an ISFSI shall be preserved for a period of five years after the date of transfer.

### § 72.52 Reports of accidental criticality or loss of special nuclear material.

Each licensee shall report immediately to the appropriate NRC regional Office specified in Appendix D of Part 20 of this chapter by telephone and telegram or teletype, any case of accidental criticality and any loss of special nuclear material.

### § 72.53 Material status reports.

Each licensee shall complete and submit Material Status Reports to the Commission on Form NRC-742, in accordance with printed instructions for completing the form. The reports shall provide information concerning the special nuclear material contained in spent fuel possessed, received, transferred, disposed of, or lost by the licensee. All such reports shall be made as of March 31 and September 30 of each year and shall be filed with the U.S.

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Department of Energy, P.O. Box E, Oak Ridge, Tennessee 37830, within 30 days after the end of the period covered by the report. The Commission may, when good cause is shown, permit a licensee to submit Material Status Reports at other times.

### § 72.54 Nuclear material transfer reports.

Whenever the licensee transfers or receives spent fuel, the licensee shall complete and distribute a Nuclear Material Transaction Report on Form NRC-741. Each licensee who transfers spent fuel shall submit a copy of form NRC-741 to the U.S. Department of Energy, P.O. Box E, Oak Ridge, Tennessee 37830, and three copies to the receiver of the material promptly after the transfer takes place. Each licensee who receives spent fuel shall submit a copy of form NRC-741 to the Department of Energy and to the shipper of the material within 10 days after the spent fuel is received and unloaded and its identity is verified.

### § 72.55 Other records and reports.

(a) Each licensee shall maintain any records and make any reports that may be required by the conditions of the license or by the rules, regulations, and orders of the Commission in effectuating the purposes of the Act.

(b) Each licensee shall furnish a copy of its annual financial report, including the certified financial statements, to the Commission.

(c) Records that are required by the regulations in this part or by the license conditions shall be maintained for the period specified by the appropriate regulation or license condition. If a retention period is not otherwise specified, such records shall be maintained until the Commission authorizes their disposition.

(d) Any record that must be maintained pursuant to this Part may be either the original or a reproduced copy or microform provided that any reproduced copy or microform is duly authenticated by authorized personnel and that the microform is capable of producing a clear and legible copy after storage for the period specified by commission regulations.

### § 72.56 Inspections and tests.

(a) Each licensee under this part shall permit inspection by duly authorized representatives of the Commission of his records, premises, activities and of spent fuel in possession related to the specific license as may be necessary to effectuate the purposes of the Act, including Section 105 of the Act.

(b) Each licensee under this Part shall make available to the Commission for

inspection, upon reasonable notice, records kept by the licensee pertaining to his receipt, possession, or transfer of spent fuel.

(c)(1) Each licensee under this Part shall upon request by the Director, Office of Inspection and Enforcement provide rent-free office space for the exclusive use of the Commission inspection personnel. Heat, air conditioning, light, electrical outlets and janitorial services shall be furnished by each licensee. The office shall be convenient to and have full access to the installation and shall provide the inspector both visual and acoustic privacy.

(2) For a site with a single storage installation the space provided shall be adequate to accommodate a full-time inspector, a part-time secretary and transient NRC personnel and will be generally commensurate with other office facilities at the site. A space of 250 sq. ft., either within the site's office complex or in an office trailer, or other on site space, is suggested as a guide. For sites containing multiple facilities additional space may be requested to accommodate additional full-time inspectors. The office space that is provided shall be subject to the approval of the Director, Office of Inspection and Enforcement. All furniture, supplies and Commission equipment shall be furnished by the Commission.

(3) Each licensee under this Part shall afford any NRC resident inspector assigned to that site, or other NRC inspectors identified by the Regional Director as likely to inspect the installation, immediate unfettered access, equivalent to access provided regular plant employees, following proper identification and compliance with applicable access control measures for security, radiological protection and personal safety.

(d) Each licensee shall perform, or permit the Commission to perform, such tests as the Commission deems appropriate or necessary for the administration of the regulations in this part.

(e) A report of the preoperational test acceptance criteria and test results shall be submitted to the appropriate regional office specified in Appendix D of Part 20 of this chapter with a copy to the Director, Office of Nuclear Material Safety and Safeguards at least 30 days prior to the receipt of spent fuel.

### § 72.57 Violation.

An injunction or other court order may be obtained prohibiting any violation of any provision of the Atomic Energy Act of 1954, as amended, or title

II of the Energy Reorganization Act of 1974, as amended, or any regulation or order issued thereunder. A court order may be obtained for the payment of a civil penalty imposed pursuant to section 234 of the Atomic Energy Act for violation of §§ 53, 57, 62, 63, 81, or 82 of the Atomic Energy Act, or section 206 of the Energy Reorganization Act of 1974, or any rule, regulation, or order issued thereunder, or any term, condition, or limitation of any license issued thereunder, or for any violation for which a license may be revoked under section 186 of the Atomic Energy Act. Any person who willfully violates any provision of the Atomic Energy Act, or any regulation or order issued thereunder, may be guilty of a crime and, upon conviction, may be punished by fine or imprisonment or both, as provided by law.

## Subpart E—Siting Evaluation Factors

### § 72.61 General considerations.

(a) Site characteristics that may directly affect the safety or environmental impact of the ISFSI shall be investigated and assessed.

(b) Proposed sites for the ISFSI shall be examined with respect to the frequency and the severity of external natural and man-induced events that could affect the safe operation of the ISFSI.

(c) Design basis external events shall be determined for each combination of proposed site and proposed ISFSI design.

(d) Proposed sites with design basis external events for which adequate protection cannot be provided through ISFSI design shall be deemed unsuitable for the location of the ISFSI.

(e) For each proposed site, pursuant to Part 51 of this chapter, the potential for radiological and other environmental impacts on the region shall be evaluated with due consideration of the characteristics of the population, including its distribution, and of the regional environs, including its historical and esthetic values.

(f) The facility shall be sited so as to avoid to the extent possible the long-term and short-term adverse impacts associated with the occupancy and modification of floodplains.

### § 72.62 Design basis external natural events.

(a) Natural phenomena that may exist or that can occur in the region of a proposed site shall be identified and assessed according to their potential effects on the safe operation of the ISFSI. The important natural phenomena



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that affect the ISFSI design shall be identified.

(b) Records of the occurrence and severity of those important natural phenomena shall be collected for the region and evaluated for reliability, accuracy, and completeness.

(c) Appropriate methods shall be adopted for evaluating the design basis natural events based on the characteristics of the region and the current state of knowledge about such events.

### § 72.63 Design basis external man-induced events.

(a) The region shall be examined for both past and present man-made facilities and activities that might endanger the proposed ISFSI. The important potential man-induced events that affect the ISFSI design shall be identified.

(b) Information concerning the potential occurrence and severity of such events shall be collected and evaluated for reliability, accuracy, and completeness.

(c) Appropriate methods shall be adopted for evaluating the design basis external man-induced events, based on the current state of knowledge about such events.

### § 72.64 Identifying regions around an ISFSI site.

(a) The regional extent of external phenomena, man-made or natural, that are used as a basis for the design of the ISFSI shall be defined.

(b) The potential regional impact due to the construction, operation or decommissioning of the ISFSI shall be identified. The extent of such regional impacts shall be determined on the basis of potential measurable effects on the population or the environment, from ISFSI activities.

(c) Those regions identified pursuant to paragraphs (a) and (b) of this section shall be investigated as appropriate with respect to (i) the present and future character and the distribution of population, (ii) consideration of present and projected future uses of land and water within the region, and (iii) any special characteristics that may influence the potential consequences of a release of radioactive material during the operational lifetime of the ISFSI.

(d) If the distribution of population in any defined region is such that adequate protective action cannot be provided through emergency planning the proposed site shall be unsuitable for the location of an ISFSI.

### § 72.65 Defining potential effects of the ISFSI on the region.

(a) The proposed site shall be evaluated with respect to the effects on populations in the region resulting from the release of radioactive materials under normal and accident conditions during operation and decommissioning of the ISFSI; in this evaluation both usual and unusual regional and site characteristics shall be taken into account.

(b) Each site shall be evaluated with respect to the effects on the regional environment resulting from construction, operation and decommissioning of the ISFSI; in this evaluation both usual and unusual regional and site characteristics shall be taken into account.

### § 72.66 Geological and seismological characteristics.

#### (a) Massive Water Basin and Air-Cooled Canyon Types of ISFSI Structures:

(1) East of the Rocky Mountain Front (east of approximately 104° west longitude), except in areas of known seismic activity including but not limited to the regions around New Madrid, Mo., Charleston, S.C., and Attica, N.Y., sites will be acceptable if the results from onsite foundation and geological investigation, literature review, and regional geological reconnaissance show no unstable geological characteristics, soil stability problems, or potential for vibratory ground motion at the site in excess of an appropriate response spectrum anchored at 0.2 g.

(2) West of the Rocky Mountain Front (west of approximately 104° west longitude), and in other areas of known potential seismic activity, seismicity will be evaluated by the techniques of Appendix A of Part 100 of this chapter. Sites that lie within the range of strong near-field ground motion from historical earthquakes on large capable faults should be avoided.

(3) Sites other than bedrock sites shall be evaluated for their liquefaction potential or other soil instability due to vibratory ground motion.

(4) Site-specific investigations and laboratory analyses must show that soil conditions are adequate for the proposed foundation loading.

(5) In an evaluation of alternative sites, those which require a minimum of engineered provisions to correct site deficiencies are preferred. Sites with unstable geologic characteristics should be avoided.

(6) The ISFSI design earthquake (ISFSI-DE) for use in the design of structures shall be determined as follows:

(a) For sites that have been evaluated under the criteria of Appendix A of 10 CFR Part 100, the ISFSI-DE shall be equivalent to the safe shutdown earthquake (SSE) for a nuclear power plant.

(b) For those sites that have not been evaluated under the criteria of Appendix A of 10 CFR Part 100, that are east of the Rocky Mountain Front, and that are not in areas of known seismic activity, a standardized ISFSI-DE described by an appropriate response spectrum anchored at 0.25 g may be used. Alternatively, a site-specific ISFSI-DE may be determined by using the criteria and level of investigations required by Appendix A of Part 100 of this chapter.

(c) Regardless of the results of the investigations anywhere in the continental U.S., the ISFSI-DE shall have a value for the horizontal ground motion of no less than 0.10 g with the appropriate response spectrum.

#### (b) Other types of ISFSI Designs.

For ISFSI designs that do not use massive water basins or air-cooled canyons, such as canisters, casks, or silos, a site specific investigation is required to establish site suitability commensurate with the specific requirements of the proposed ISFSI.

### § 72.67 Criteria for radioactive materials in effluents and direct radiation from an ISFSI.

(a) During normal operations and anticipated occurrences, the annual dose equivalent to any real individual who is located beyond the controlled area shall not exceed 25 mrem to the whole body, 75 mrem to the thyroid and 25 mrem to any other organ as a result of exposure to (1) planned discharges of radioactive materials, radon and its daughters excepted, to the general environment, (2) direct radiation from ISFSI operations and (3) any other radiation from uranium fuel cycle operations within the region.

(b) Operational restrictions shall be established to meet as low as is reasonably achievable objectives for radioactive materials in effluents and direct radiation levels associated with ISFSI operations.

(c) Operational limits shall be established for radioactive materials in effluents and direct radiation levels associated with ISFSI operations to meet the limits given in paragraph (a) of this section.

### § 72.68 Controlled area of an ISFSI.

(a) For each ISFSI site, a controlled area shall be established.

(b) Any individual located on or beyond the nearest boundary of the controlled area shall not receive a dose greater than 5 rem to the whole body or

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any organ from any design basis accident. The minimum distance from the spent fuel handling and storage facilities to the nearest boundary of the controlled area shall be at least 100 meters.

(c) The controlled area may be traversed by a highway, railroad or waterway, so long as appropriate and effective arrangements are made to control traffic and to protect the public health and safety.

### 72.69 ISFSI emergency planning zone.

(a) For each ISFSI site, an ISFSI Emergency Planning Zone (ISFSI-EPZ) shall be established. The ISFSI-EPZ shall provide reasonable assurance that protective actions beyond its outer boundary would not be necessary.

(b) The boundaries of an ISFSI-EPZ for a particular ISFSI will be determined on a case-by-case basis taking into account both the characteristics of the specific facility and local conditions such as demography, topography, land characteristics, access routes and local jurisdictional boundaries.

### § 72.70 Spent fuel transportation.

The proposed ISFSI shall be evaluated with respect to the potential impact on the environment of spent fuel being transported into the area.

## Subpart F—General Design Criteria

### § 72.71 General Considerations.

Pursuant to the provisions of § 72.15 of this Part, an application to store spent fuel in an ISFSI must include the design criteria for the proposed storage complex. These design criteria establish the design, fabrication, construction, testing, and performance requirements for structures, systems, and components important to safety as defined in § 72.3. The general design criteria identified in this section establish minimum requirements for the design criteria for an ISFSI. Any omissions in these general design criteria do not relieve the applicant from the requirement of providing the necessary safety features in the design of the ISFSI.

### § 72.72 Overall requirements.

(a) *Quality Standards.*—Structures, systems, and components important to safety shall be designed, fabricated, erected, and tested to quality standards commensurate with the importance to safety of the function to be performed.

(b) *Protection against environmental conditions and natural phenomena.*—(1) Structures, systems, and components important to safety shall be designed to accommodate the effects of, and to be compatible with, site characteristics and environmental conditions associated

with normal operation, maintenance, and testing of the ISFSI; and to withstand postulated accidents.

(2) Structures, systems, and components important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, lightning, hurricanes, floods, tsunamis, and seiches, without impairing their capability to perform safety functions. The design bases for these structures, systems, and components shall reflect (i) appropriate consideration of the most severe of the natural phenomena reported for the site and surrounding area, with appropriate margins to take into account the limitations of the data and the period of time in which the data have accumulated, and (ii) appropriate combinations of the effects of normal and accident conditions and the effects of natural phenomena. An ISFSI need not be protected from tornado missiles but should be designed to prevent massive collapse of building structures or the dropping of heavy objects on to the stored spent fuel as a result of building structural failures.

(3) Capability shall be provided for determining the intensity of natural phenomena that may occur for comparison with design bases of structures, systems, and components important to safety.

(4) If the ISFSI is located over an aquifer which is a major water resource, measures shall be taken to preclude the transport of radioactive materials to the environment through this potential pathway.

### (c) Protection Against Fires and Explosions.

Structures, systems, and components important to safety shall be designed and located so that they can continue to perform their safety functions effectively under credible fire and explosion exposure conditions. Noncombustible and heat-resistant materials shall be used wherever practical throughout the ISFSI, particularly in locations vital to the control of radioactive materials and to the maintenance of safety control functions. Explosion and fire detection, alarm, and suppression systems shall be designed and provided with sufficient capacity and capability to minimize the adverse effects of fires and explosions on structures, systems, and components important to safety. The design of the ISFSI shall include provisions to protect against adverse effects that might result from either the operation or the failure of the fire suppression system.

(d) *Sharing of structures, systems, and components.*—Structures, systems, and components important to safety shall not be shared between an ISFSI and

other facilities unless it is shown that such sharing will not impair the capability of either facility to perform its safety functions, including the ability to return to a safe condition in the event of an accident.

(e) *Proximity of sites.*—An ISFSI located near other nuclear facilities shall be designed and operated to ensure that the cumulative effects of their combined operations will not constitute an unreasonable risk to the health and safety of the public.

(f) *Testing and maintenance of systems and components.*—Systems and components that are important to safety shall be designed to permit inspection, maintenance, and testing.

(g) *Emergency capability.*—Structures, systems, and components important to safety shall be designed for emergencies. The design shall provide for accessibility to the equipment of onsite and available offsite emergency facilities and services such as hospitals, fire and police departments, ambulance service, and other emergency agencies.

(h) *Confinement barriers and systems.*—(1) The fuel cladding shall be protected against degradation and gross ruptures.

(2) For underwater storage of spent fuel in which the pool water serves as a shield and a confinement medium for radioactive materials, systems designed for maintaining water purity and the pool water level shall be designed so that any abnormal operations or failure in those systems from any cause will not cause the water level to fall below safe limits. The design shall preclude installations of drains, permanently connected systems, and other features that could by abnormal operations or failure cause a significant loss of water. Pool water level equipment shall be provided to alarm in a continuously manned location if the water level in the fuel storage pools falls below a predetermined level.

(3) Ventilation and off-gas systems shall be provided where necessary to ensure the confinement of airborne radioactive particulate materials during normal or off-normal conditions.

(i) *Instrumentation and control systems.*—Instrumentation and control systems shall be provided to monitor systems that are important to safety over anticipated ranges for normal operation and off-normal operation. Those instruments and control systems that must remain operational under accident conditions shall be identified in the Safety Analysis Report.

(j) *Control room or control areas.*—A control room or control areas shall be designed to permit occupancy and actions to be taken to monitor the ISFSI



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safely under normal conditions, and to provide safe control of the ISFSI under off-normal or accident conditions.

(k) *Utility services.*—(1) Each utility service system shall be designed to meet emergency conditions. The design of utility services and distribution systems that are important to safety shall include redundant systems to the extent necessary to maintain, with adequate capacity, the ability to perform safety functions assuming a single failure.

(2) Emergency utility services shall be designed to permit testing of the functional operability and capacity, including the full operational sequence, of each system for transfer between normal and emergency supply sources; and to permit the operation of associated safety systems.

(3) Provisions shall be made so that, in the event of a loss of the primary electric power source or circuit, reliable and timely emergency power will be provided to instruments, utility service systems, the central security alarm station, and operating systems, in amounts sufficient to allow safe storage conditions to be maintained and to permit continued functioning of all systems essential to safe storage.

### § 72.73 Criteria for nuclear criticality safety.

(a) *Design for criticality safety.*—Spent fuel handling, transfer, and storage systems shall be designed to be maintained subcritical and to prevent a nuclear criticality accident. The design of handling, transfer, and storage systems shall include margins of safety for the nuclear criticality parameters that are commensurate with the uncertainties in the handling, transfer and storage conditions, in the data and methods used in calculations, and in the nature of the immediate environment under accident conditions.

(b) *Methods of criticality control.*—The design of an ISFSI shall be based on either favorable geometry (spacing) or permanently fixed neutron absorbing materials (poisons). Where solid neutron absorbing materials are used, the design shall provide for positive means to verify their continued efficacy. In criticality design analyses for underwater storage systems, credit can be taken for the neutron absorption of rack structures and the water within the storage unit.

### § 72.74 Criteria for radiological protection.

(a) *Exposure control.*—Radiation protection systems shall be provided for all areas and operations where onsite personnel may be exposed to radiation or airborne radioactive materials.

Structures, systems, and components for

which operation, maintenance, and required inspections may involve such exposure shall be designed, fabricated, located, shielded, controlled, and tested so as to control external and internal radiation exposures to personnel. The design shall include means to:

(1) prevent the accumulation of radioactive material in those systems requiring access;

(2) decontaminate those systems to which access is required;

(3) control access to areas of potential contamination or high radiation within the ISFSI;

(4) measure and control contamination of areas requiring access;

(5) minimize the time required to perform work in the vicinity of radioactive components; for example, by providing sufficient space for ease of operation and designing equipment for ease of repair and replacement; and

(6) shield personnel from radiation exposure.

(b) *Radiological alarm systems.*—Radiological alarm systems shall be provided in accessible work areas to warn operating personnel of radiation and airborne radioactivity levels above a given setpoint and of concentrations of radioactive material in effluents above control limits. Such systems shall be designed with provisions for calibration and testing their operability.

(c) *Effluent and direct radiation monitoring.*—

(1) Effluent systems shall be provided with means for measuring the amount of radionuclides in effluents during normal operations and under accident conditions. A means of measuring the flow of the diluting medium, either air or water, shall also be provided.

(2) Areas containing radioactive materials shall be provided with systems for measuring the direct radiation levels in and around these areas.

(d) *Effluent Control.*

The ISFSI shall be designed to provide means to limit to levels as low as is reasonably achievable the release of radioactive materials in effluents during normal operations; and control the release of radioactive materials under accident conditions. Analyses shall be made to show that releases to the general environment during normal operations and anticipated occurrences will be within the exposure limits given in § 72.67. Analyses of design basis accidents shall be made, to show that releases to the general environment will be within the exposure limits given in § 72.68. Systems designed to monitor the release of radioactive materials shall have means for calibration and testing their operability.

### § 72.75 Criteria for spent fuel and radioactive waste storage and handling.

(a) *Spent Fuel and Radioactive Waste Storage and Handling Systems.*

Spent fuel storage, radioactive waste storage, and other systems that might contain or handle radioactive materials associated with spent fuel, shall be designed to ensure adequate safety under normal and accident conditions. These systems shall be designed with (1) a capability to test and monitor components important to safety, (2) suitable shielding for radiation protection under normal and accident conditions, (3) confinement structures and systems, (4) a heat-removal capability having testability and reliability consistent with its importance to safety, and (5) means to minimize the quantity of radioactive wastes generated.

(b) *Waste Treatment.*

Radioactive waste treatment facilities shall be provided. Provisions shall be made for the packaging of site-generated low level wastes in a form suitable for transfer to disposal sites.

### § 72.76 Criteria for decommissioning.

The ISFSI shall be designed for decommissioning. Provisions shall be made to facilitate decontamination of structures and equipment, minimize the quantity of radioactive wastes and contaminated equipment, and facilitate the removal of radioactive wastes and contaminated materials at the time the ISFSI is permanently decommissioned.

### Subpart G—Quality Assurance

#### § 72.80 Quality assurance program; Records.

(a) A quality assurance program based on the criteria in Appendix B to Part 50 of this chapter shall be established and implemented for the structures, systems, and components of an ISFSI that are important to safety. The application of the quality assurance program should be commensurate with the importance to safety of identified activities and individual structures, systems, and components.

(b) The quality assurance program shall cover all activities identified as being important to safety throughout the life of the licensed activity—from site selection through decommissioning—prior to termination of the license.

(c) Appropriate records of the design, fabrication, erection, testing, maintenance and occupation of structures, systems, and components important to safety shall be maintained by or under the control of the licensee throughout the life of the ISFSI.

## PART 72 • LICENSING REQUIREMENTS FOR THE STORAGE OF SPENT FUEL .....

### Subpart H—Physical Protection

#### § 72.81 Physical security plan.

A plan for detailed security measures for physical protection shall be established. This plan shall consist of two parts. Part I shall demonstrate how the applicant plans to comply with the applicable requirements of Part 73 of this chapter and during transportation to and from the proposed ISFSI and shall include the design for physical protection and the licensee's safeguards contingency plan and guard training plan. Part II shall list tests, inspections, audits, and other means to be used to demonstrate compliance with such requirements.

#### § 72.82 Design for physical protection.

The design for physical protection shall show the site layout and ISFSI design features provided to protect the ISFSI from sabotage. It shall include:

(a) The design criteria for the physical protection of the proposed ISFSI;

(b) The design bases and the relation of the design bases to the design criteria submitted pursuant to paragraph (a) of this section; and

(c) Information relative to materials of construction, equipment, general arrangement, and proposed quality assurance program sufficient to provide reasonable assurance that the final security system will conform to the design bases for the principal design criteria submitted pursuant to paragraph (a) of this section.

#### § 72.83 Safeguards contingency plan.

(a) The requirements of the licensee's safeguards contingency plan for dealing with threats and industrial sabotage shall be as defined in § 73.40(b) of this Chapter. This plan shall include Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix, the first four categories of information relating to nuclear facilities licensed under Part 50 of this chapter. (The fifth category of information, Procedures, does not have to be submitted for approval.)

(b) The licensee shall prepare and maintain safeguards contingency plan procedures in accordance with Appendix C to 10 CFR Part 73 for effecting the actions and decisions contained in the Responsibility Matrix of the licensee's safeguards contingency plan.

#### § 72.84 Change to physical security and safeguards contingency plans.

(a) The licensee shall make no change that would decrease the safeguards effectiveness of the physical security plan or the first four categories of information (Background, Generic Planning Base, Licensee Planning Base,

and Responsibility Matrix) contained in the licensee safeguards contingency plan without the prior approval of the Commission. A licensee desiring to make such a change shall submit an application for an amendment to his license pursuant to § 72.39.

(b) The licensee may, without prior Commission approval, make changes to the physical security plan or the safeguards contingency plan, if the changes do not decrease the safeguards effectiveness of these plans. The licensee shall maintain records of changes to any such plan made without prior approval for a period of 2 years from the date of the change and shall furnish to the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the appropriate NRC Regional Office specified in Appendix A to Part 73 of this chapter, a report containing a description of each change within 2 months after the change is made.

### Subpart I—Training and Certification of ISFSI Personnel

#### § 72.91 Operator requirements.

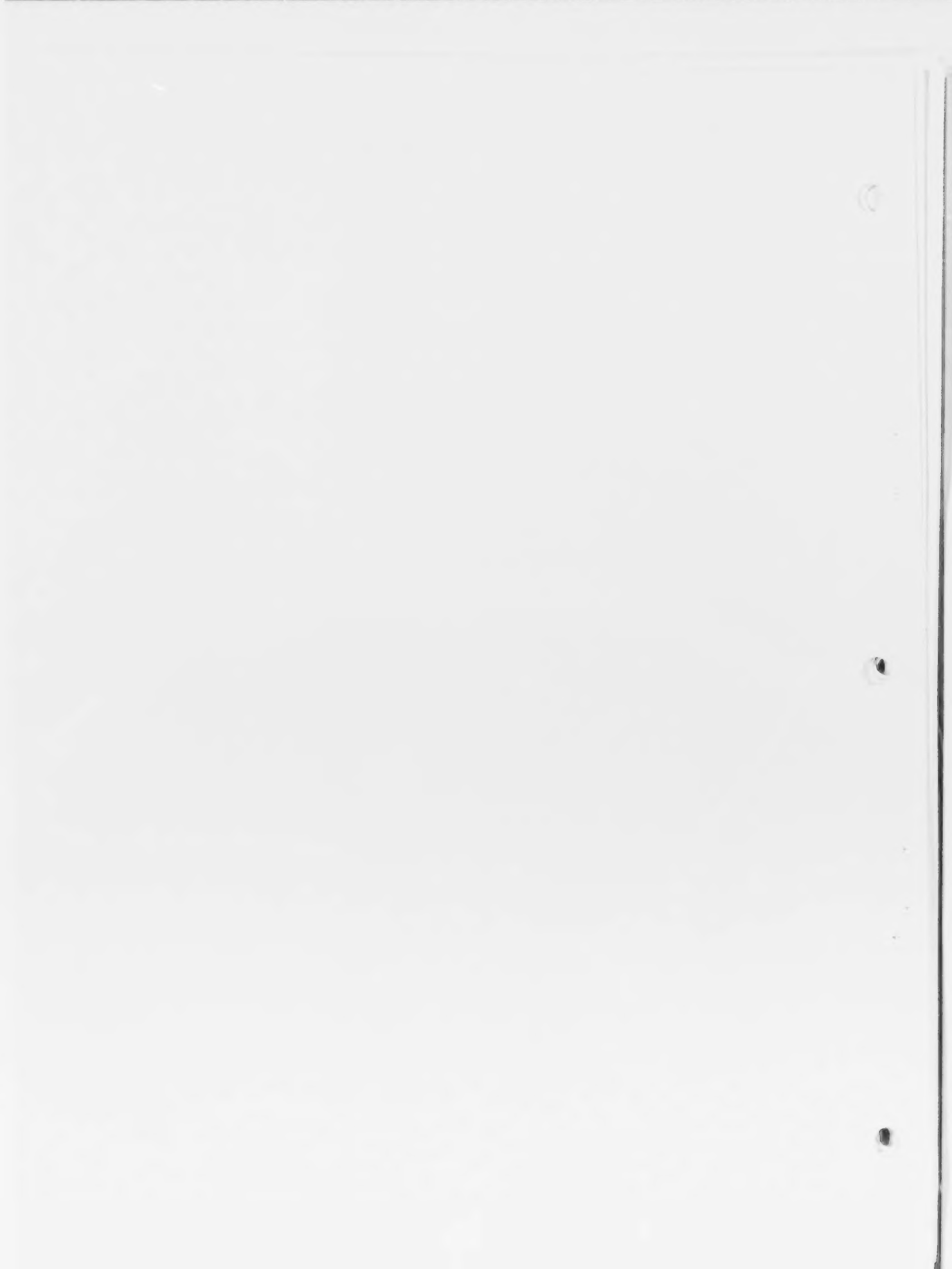
Operation of equipment and controls that have been identified as important to safety in the Safety Analysis Report and in the license shall be limited to trained and certified personnel or be under the direct visual supervision of an individual with training and certification in such operation. Supervisory personnel who personally direct the operation of equipment and controls that are important to safety must also be certified in such operations.

#### § 72.92 Operator training and certification program.

The applicant for a license under this part shall establish a program for training, proficiency testing, and certification of ISFSI personnel. This program shall be submitted to the Commission for approval with the license application.

#### § 72.93 Physical requirements.

The physical condition and the general health of personnel certified for the operation of equipment and controls that are important to safety shall not be such as might cause operational errors that could endanger other in-plant personnel or the public health and safety. Any condition which might cause impaired judgment or motor coordination must be considered in the selection of personnel for activities that are important to safety. Such conditions need not categorically disqualify a person, so long as appropriate provisions are made to accommodate such defect.



**UNITED STATES NUCLEAR REGULATORY COMMISSION**  
**RULES and REGULATIONS**  
**TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY**

**PART**  
**73**

**PHYSICAL PROTECTION OF PLANTS AND MATERIALS**

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Appendix C—Licensee Safeguards Contingency Plans  
Appendix D—Physical Protection of Irradiated Reactor Fuel in Transit, Training Program Subject Schedule  
**Authority:** Secs. 53, 161b, 161i, 161o, Pub. L. 83-703, 68 Stat. 930, 948-50, as amended Pub. L. 85-507, 72 Stat. 327, Pub. L. 93-377, 88 Stat. 475 (42 U.S.C. 2073, 2201); sec. 201, Pub. L. 93-438, 88 Stat. 1242, 1243, as amended Pub. L. 94-79, 89 Stat. 413 (42 U.S.C. 5841).

**§ 73.1 Purpose and scope.**

(a) *Purpose.* This part prescribes requirements for the establishment and maintenance of a physical protection system which will have capabilities for the protection of special nuclear material at fixed sites and in transit and of plants in which special nuclear material is used. The following design basis threats, where referenced in ensuing sections of this part, shall be used to design safeguards systems to protect against acts of radiological sabotage and to prevent the theft of special nuclear material:

(1) *Radiological Sabotage.* (i) A determined violent external assault, attack by stealth, or deceptive actions, of several persons with the following attributes, assistance and equipment: (A) Well-trained (including military training and skills) and dedicated individuals, (B) inside assistance which may include a knowledgeable individual who attempts to participate in a passive role (e.g., provide information), an active role (e.g., facilitate entrance and exit, disable alarms and communications, participate in violent attack), or both, (C) suitable weapons, up to and including hand-held automatic weapons, equipped with silencers and having effective long range accuracy, (D) hand-carried equipment, including incapacitating agents and explosives for use as tools of entry or for otherwise destroying reactor, facility, transporter, or container integrity or features of the safeguards system, and (ii) An internal threat of an insider, including an employee (in any position).

(2) *Theft or Diversion of Formula Quantities of Strategic Special Nuclear Material.* (i) A determined violent external

assault, attack by stealth, or deceptive actions, by a small group with the following attributes, assistance and equipment: (A) Well-trained (including military training and skills) and dedicated individuals, (B) inside assistance which may include a knowledgeable individual who attempts to participate in a passive role (e.g., provide information), an active role (e.g., facilitate entrance and exit, disable alarms and communications, participate in violent attack), or both, (C) suitable weapons, up to and including hand-held automatic weapons, equipped with silencers and having effective long range accuracy, (D) hand-carried equipment, including incapacitating agents and explosives for use as tools of entry or for otherwise destroying reactor, facility, transporter or container integrity or features of the safeguards system, and (E) the ability to operate as two or more teams.

(ii) An individual, including an employee (in any position), and (iii) A conspiracy between individuals in any position who may have: (A) Access to and detailed knowledge of nuclear power plants or the facilities referred to in § 73.20(a), or (B) items that could facilitate theft of special nuclear material (e.g., small tools, substitute material, false documents, etc.), or both.

(b) *Scope.* (1) This part prescribes requirements for (i) the physical protection of production and utilization facilities licensed pursuant to Part 50 of this chapter, (ii) the physical protection of plants in which activities licensed pursuant to Part 70 of this chapter are conducted, and (iii) the physical protection of special nuclear material by any person who, pursuant to the regulations in Part 70 of this chapter, possesses or uses at any site or contiguous sites subject to the control by the licensee, formula quantities of strategic special nuclear material or special nuclear material of moderate strategic significance or special nuclear material of low strategic significance.

(2) This part prescribes requirements for the physical protection of special nuclear material in transportation by any person who is licensed pursuant to the regulations in Part 70 and Part 110 of this chapter who imports, exports, transports, delivers to a carrier for

## PART 73 • PHYSICAL PROTECTION OF PLANTS AND MATERIALS

transport in a single shipment, or takes delivery of a single shipment free on board (F.O.B.) where it is delivered to a carrier, formula quantities of strategic special nuclear material, special nuclear material of moderate strategic significance or special nuclear material of low strategic significance.

(3) This part also applies to shipments by air of special nuclear material in quantities exceeding (i) 20 grams or 20 curies, whichever is less, of plutonium or uranium-233, or (ii) 350 grams of uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope)

(4) Special nuclear material subject to this part may also be protected pursuant to security procedures prescribed by the Commission or another Government agency for the protection of classified materials. The provisions and requirements of this part are in addition to, and not in substitution for, any such security procedures. Compliance with the requirements of this part does not relieve any licensee from any requirement or obligation to protect special nuclear material pursuant to security procedures prescribed by the Commission or other Government agency for the protection of classified materials.

(5) This part also applies to the shipment of irradiated reactor fuel in quantities that in a single shipment both exceed 100 grams in net weight of irradiated fuel, exclusive of cladding or other structural or packaging material, and have a total radiation dose in excess of 100 rems per hour at a distance of 3 feet from any accessible surface without intervening shielding.

(b) *Scope.* This part prescribes requirements for the physical protection of spent fuel stored in an independent spent fuel storage installation (ISFSI) licensed under Part 72 of this Chapter.

### § 73.2 Definitions.

As used in this part:

(a) Terms defined in Parts 50 and 70 of this chapter have the same meaning when used in this part.

(b) "Authorized individual" means any individual, including an employee, a student, a consultant, or an agent of a licensee who has been designated in writing by a licensee to have responsibility for surveillance of or control over special nuclear material or to have unescorted access to areas where special nuclear material is used or stored.

(c) "Guard" means a uniformed individual armed with a firearm whose primary duty is the protection of special nuclear material against theft, the protection of a plant against radiological sabotage, or both.

(d) "Watchman" means an individual, not necessarily uniformed or armed with a firearm, who provides protection for a plant and the special nuclear material therein in the course of performing other duties.

(e) "Continuous visual surveillance" means unobstructed view at all times of a shipment of special nuclear material, and of all access to a temporary storage area or cargo compartment containing the shipment.

(f) "Physical barrier" means

(1) Fences constructed of No. 11 American wire gauge, or heavier wire fabric, topped by three strands or more of barbed wire or similar material on brackets angled outward between 30° and 45° from the vertical, with an overall height of not less than eight feet, including the barbed topping;

(2) Building walls, ceilings and floors constructed of stone, brick, cinder block, concrete, steel or comparable materials (openings in which are secured by grates, doors, or covers of construction and fastening of sufficient strength such that the integrity of the wall is not lessened by any opening), or walls of similar construction, not part of a building, provided with a barbed topping described in paragraph (f)(1) of this section of a height of not less than 8 feet; or

(3) Any other physical obstruction constructed in a manner and of materials suitable for the purpose for which the obstruction is intended.

(g) "Protected area" means an area encompassed by physical barriers and to which access is controlled.

(h) "Vital area" means any area which contains vital equipment.

(i) "Vital equipment" means any equipment, system, device, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation. Equipment or systems which would be required to function to protect public health and safety following such failure, destruction, or release are also considered to be vital.

(j) "Material access area" means any location which contains special nuclear material, within a vault or a building, the roof, walls, and floor of which each constitute a physical barrier.

(k) "Isolation zone" means any area adjacent to a physical barrier, clear of all objects which could conceal or shield an individual.

(l) "Intrusion alarm" means a tamper indicating electrical, electromechanical, electrooptical, electronic or similar device which will detect intrusion by an individual into a building, protected area, vital area, or material access area, and alert guards or watchmen by means of actuated visible and audible signals.

(m) "Lock" in the case of vaults or vault type rooms means a three-position, manipulation resistant, dial type, built-in combination lock or combination padlock and in the case of fences, walls, and buildings means an integral door lock or padlock which provides protection equivalent to a six-tumbler cylinder lock. "Lock" in the case of a vault or vault type room also means any manipulation resistant, electromechanical device which provides the same function as a built-in combination lock or combination padlock, which can be operated remotely or by the "reading" or insertion of information, which can be uniquely characterized, and which allows operation of the device. "Locked" means protected by an operable lock.

(n) "Vault" means a windowless enclosure with walls, floor, roof and door(s) designed and constructed to delay penetration from forced entry.

(o) "Vault-type room" means a room with one or more doors, all capable of being locked, protected by an intrusion alarm which creates an alarm upon the entry of a person anywhere into the room and upon exit from the room or upon movement of an individual within the room.

(p) "Radiological sabotage" means any deliberate act directed against a plant or transport in which an activity licensed pursuant to the regulations in this chapter is conducted, or against a component of such a plant or transport which could directly or indirectly endanger the public health and safety by exposure to radiation.

(q) "DOE" and "Department of Energy" means the Department of Energy established by the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565, 42 U.S.C. 7101 *et seq.*), to the extent that the Department, or its duly authorized representatives, exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers and components and transferred to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104(b), (c) and (d) of the Energy Reorganization Act of 1974 (Pub. L. 93-438, 88 Stat. 1233 at 1237, 42 U.S.C. 5814) and retransferred to the Secretary of Energy



## PART 75 • SAFEGUARDS ON NUCLEAR MATERIAL—IMPLEMENTATION

### Reports

#### § 75.31 General requirements.

Each licensee who has been given notice by the Commission in writing that its installation has been identified under the Agreement shall make an initial inventory report, and thereafter shall make accounting reports, with respect to such installation; and, in addition, licensees who have been given notice, pursuant to § 75.41, that their installations are subject to the application of IAEA safeguards, shall make the special reports described in § 75.36. Such reports shall be based on the records kept in accordance with § 75.21. At the request of the Commission, the licensee shall amplify or clarify any report with respect to any matter relevant to implementation of the Agreement. Such amplification or clarification shall be in writing and shall be submitted, to the address specified in the request, within twenty (20) days or such other time as may be specified by the Commission.

#### § 75.32 Initial inventory report.

(a) The initial inventory reporting date shall be the last day of the calendar month in which the Commission gives the licensee notice that an initial inventory report is required.

(b) The initial inventory report, to be submitted to the Commission on DOE/NRC Form-742, Material Balance Report, in accordance with printed instructions for completing the form, shall show the quantities of nuclear material contained in or at an installation as of the initial inventory reporting date. The information in the initial inventory report may be based upon the licensee's book record.

(c) The initial inventory report shall be dispatched within twenty (20) days after the initial inventory reporting date.

#### § 75.33 Accounting reports.

(a) The accounting reports for each IAEA material balance area shall consist of (1) inventory change reports showing all changes in the inventory of nuclear material and (2) material status reports showing the material balance based on a physical inventory of nuclear material actually present.

(b) The reports shall be based on data available as of the date of reporting and may be corrected at a later date, as required.

#### § 75.34 Inventory change reports.

(a) Inventory change reports, to be submitted on DOE/NRC Form-741, Nuclear Material Transaction Report, and prepared in accordance with

printed instructions for completing the form, shall specify identification and batch data for each batch of nuclear material, the date of the inventory change, and, as appropriate, (1) the originating IAEA material balance area or the shipper and (2) the receiving IAEA material balance area or the recipient. Each licensee who receives special nuclear material from a foreign source shall complete both the supplier's and receiver's portion of DOE/NRC Form-741; perform independent tests to assure the accurate identification and measurement of the material received including its weight and enrichment; and indicate the results of these tests on the receiver's portion of the form.

(b) Inventory change reports, when appropriate, will be accompanied by concise notes submitted on DOE/NRC Form-740M, Concise Note, and prepared in accordance with printed instructions for completing the form:

(1) Explaining the inventory changes on the basis of the operating records provided for under § 75.23; and

(2) Describing, to the extent specified in the license conditions, the anticipated operational program for the installation, including particularly, but not exclusively, the schedule for taking physical inventory.

#### § 75.35 Material status reports.

(a) A material status report shall be submitted for each physical inventory which is taken as part of the material accounting and control procedures required by § 75.21. The material status report shall include a Material Balance Report (on DOE/NRC Form-742) and, attached thereto, a Physical Inventory Listing (on DOE/NRC Form-742C) which lists all batches separately and specifies material identification and batch data for each batch. Also, when appropriate, the material status report shall be accompanied by DOE/NRC Form-740M, Concise Note. The reports specified in this section shall be prepared and submitted in accordance with the printed instructions for completing the referenced forms.

(b) Unless otherwise specified in the license conditions, material status reports shall be dispatched as soon as possible and in any event within thirty (30) days after the start of the physical inventory.

#### § 75.36 Special reports.

(a) This section applies only to licensees who have been given notice, pursuant to § 75.41, that their installations are subject to the application of IAEA safeguards.

(b) Each licensee who is subject to this section shall immediately make a special report to the Commission, by telephone (and also by telegraph, mailgram, or facsimile), in those situations described in license conditions.

(c) The situations referred to in paragraph (b) of this section include (1) the possibility of loss of nuclear material in excess of specified limits and (2) unexpected changes in containment to the extent that unauthorized removal of nuclear material has become possible.

#### § 75.37 Disclosure of reports to IAEA.

The Commission may communicate to the IAEA any reports submitted to it pursuant to this part or any information contained in such reports.

### Installations Designated for IAEA Safeguards

#### § 75.41 Designation.

The Commission, by written notice, will designate those installations which, in accordance with identifications made from time to time by the IAEA, under Article 39(b) of the principal text of the Agreement, are subject to the application of IAEA safeguards. Such notice shall be effective until the Commission informs the licensee, in writing, that its installation is no longer so designated. Whenever a previously-designated installation is no longer subject to the application of IAEA safeguards, the Commission will give the licensee prompt notice to that effect.

#### § 75.42 Inspections.

(a) Each licensee who has been given notice pursuant to § 75.41 shall afford to the IAEA, at all reasonable times, opportunity to inspect its designated installation as provided in this section. Licensee representatives may accompany IAEA inspectors, provided that the IAEA inspectors are not thereby delayed or otherwise impeded in the exercise of their functions.

(b) As provided in the Agreement, an inspection may be ad hoc, routine, or special (or a combination of the foregoing). An inspection shall be deemed to be routine unless the Commission has specifically advised the licensee otherwise.

(c) The locations to which IAEA inspectors shall have access in the performance of inspections shall be as follows:

(1) Ad hoc inspections to verify information contained in the licensee's initial inventory report or to identify and verify changes in the situation which have occurred since the initial inventory reporting date; any location where the initial inventory report or any inspections carried out therewith indicate that nuclear material subject to safeguards under the Agreement may be

## PART 75 • SAFEGUARDS ON NUCLEAR MATERIAL—IMPLEMENTATION

present.

(2) Ad hoc inspections to identify and if possible verify the quantity and composition of the nuclear material referred to in notifications given under § 75.43(b) (pertaining to exports) or § 75.43(c) (pertaining to imports): Any place where such nuclear material may be located.

(3) Routine inspections: The strategic points referred to in § 75.11 (or, until such strategic points have been specified, to the locations referred to in paragraph (c)(1) of this section) and the records maintained pursuant to this part.

(4) Special inspections: Any of the locations specified above and any additional locations where the Commission, in response to an IAEA request, finds access to be necessary.

(d) Each licensee shall permit the IAEA, in conducting any such inspections, to:

(1) Examine the records kept pursuant to § 75.21 of this part;

(2) Observe that the measurements of nuclear material at key measurement points for material balance accounting are representative;

(3) Verify the functioning and calibration of instruments and other measuring control equipment.

(4) Observe that samples at key measurement points for material balance accounting are taken in accordance with procedures which produce representative samples, to observe the treatment and analysis of the samples, and to obtain duplicates of such samples; and

(5) Arrange to use the IAEA's own equipment for independent measurement and surveillance.

(e) Each licensee shall, at the request of an IAEA inspector:

(1) Ship samples taken for the IAEA's use, in accordance with applicable packaging and export licensing regulations, by the method of carriage and to the address specified by the inspector; and

(2) Take other actions contemplated by the Agreement, as evidenced by the license conditions, including, for example:

(i) Enabling the IAEA to arrange to install its equipment for measurement and surveillance;

(ii) Enabling the IAEA to apply its seals and other identifying and tamper-indicating devices to containments;

(iii) Making additional measurements and taking additional samples for the IAEA's use;

(iv) Analyzing the IAEA's standard analytical samples;

(v) Using appropriate standards in calibrating instruments and other equipment; and

(vi) Carrying out other calibrations.

(f) Nothing in this section shall be

deemed to require or authorize the licensee to carry out any operation that would otherwise constitute a violation of the terms of any applicable license, regulation, or order of the Commission.

(g) The Commission will to the extent feasible, unless the licensee agrees otherwise, assign an employee to accompany any IAEA representative engaged in an inspection described in this section.

(h) The Commission will normally provide a licensee advance notification of any inspection to be carried out by IAEA representatives. The licensee shall notify the Commission promptly, by telephone, whenever an IAEA inspector arrives at an installation without such advance notification.

### § 75.43 Circumstances requiring advance notification.

(a) Each licensee who has been given notice, pursuant to § 75.41, shall give advance written notification to the Commission with respect to the international and domestic transfers specified in this section.

(b) Exports. Notification shall be given of any proposed shipment of nuclear material for peaceful purposes under an export license issued pursuant to Part 110 of this chapter, in an amount exceeding one effective kilogram, directly or indirectly to any non-nuclear-weapon state (as referred to in Article III(2) of the Treaty on the Non-Proliferation of Nuclear Weapons, 21 U.S.T. 483). If the licensee anticipates that it will make two or more shipments for peaceful purposes, within any period of 90 days, directly or indirectly to destinations in the same non-nuclear-weapon state, notification shall be given of each shipment if the aggregate quantity of nuclear material to be transferred exceeds one effective kilogram.<sup>2</sup>

(c) Imports. (1) Notification shall be given (to the fullest extent possible on the basis of available information) with respect to nuclear material which immediately prior to export is subject to safeguards, under an agreement with the IAEA, in the country from which the material, directly or indirectly, is being exported. Such notification is only required, however, if the quantities of nuclear material are as specified in paragraph (c)(2) of this section.

(2) Notification shall be given with respect to any proposed import of nuclear material described in paragraph (c)(1) of this section in an amount exceeding one effective kilogram. If the licensee anticipates that it will receive

<sup>2</sup> All foreign countries, with the exception of the People's Republic of China, France, the Soviet Union, and the United Kingdom, are non-nuclear-weapon states. Treaty on the Non-Proliferation of Nuclear Weapons, Article IX(3).

two or more shipments of such nuclear material, within any 90-day period from points of origin in the same country, notification shall be given with respect to each shipment if the aggregate quantity of such nuclear material to be received exceeds one effective kilogram.

(d) Domestic transfers. Notification shall be given with respect to any shipments of nuclear material (other than small quantities in the form of samples containing less than 0.01 effective kilogram per sample) to a non-eligible destination. As used in this paragraph, a "non-eligible destination" means any destination in the United States other than an installation on the United States eligible list.

### § 75.44 Timing of advance notification.

(a) Except as provided in paragraph (b) of this section, notification to the Commission, where required by § 75.43, shall be given:

(1) In the case of exports and domestic transfers, at least twenty days in advance of the preparation of the nuclear material for shipment from the installation.

(2) In the case of imports, at least twelve days in advance of the unpackaging of nuclear material at the installation.

(b) For a particular receipt or shipment of nuclear material, the Commission will approve a shorter notice period than that specified by paragraph (a) of this section, for good cause, if it determines that observing the specified notification period would result in delay in shipment or unpackaging.

(c) The licensee shall inform the Commission, by phone, as soon as possible, with respect to any delay in the receipt (or unpackaging) or the shipment (or preparation for shipment) of nuclear material for which advance notification is required. New dates should be provided, if known.

### § 75.45 Content of advance notification.

(a) The notifications required by § 75.43 shall include the element weight of nuclear material being received or shipped, the chemical composition and physical form, the isotopic composition (to the extent specified by license conditions), the estimated date and place at the reporting installation where the nuclear material is to be unpackaged or prepared for shipment (and where the quantity and composition can be verified), the applicable IAEA material balance area at the reporting installation, the approximate number of items to be received or shipped, and the probable dates of receipt or shipment. The notification shall indicate that the information is being supplied pursuant to § 75.43.

(b) The notifications required with

## PART 75 • SAFEGUARDS ON NUCLEAR MATERIAL—IMPLEMENTATION

respect to export and import shipments shall also include

(1) If available, a general description of containers (including, in the case of exports, features that would permit sealing);

(2) Destination of export as authorized under an export license issued pursuant to Part 110 of this chapter, or origin of import (by country and, if known, place);

(3) Means of transport; and

(4) Expected date and place of arrival in the destination country (for exports) or in the United States (for imports).

### § 75.46 Expenses.

(a) Under the Agreement, the IAEA undertakes to reimburse a licensee who has been given notice, pursuant to § 75.41, for extraordinary expenses incurred as a result of its specific request: *Provided*, That the IAEA has agreed in advance to do so. The Agreement also contemplates that in any case the IAEA will reimburse a licensee for the cost of making additional measurements or taking samples at the specific request of an IAEA inspector.

(b) The Commission will inform the licensee, in the license conditions or other written communication, of those items of extraordinary expense which the Agency has agreed in advance to reimburse.

(c) The Commission will inform the licensee, in the license conditions, of the procedures to be used to document:

(1) An IAEA inspector's request for making additional measurements or taking additional samples; and

(2) An IAEA request for a particular action by the licensee that will give rise to reimbursable extraordinary expense.

(d) The Commission will take such action as it finds to be appropriate to assist the licensee with respect to the reimbursement of any expense which, under the Agreement, is to be borne by the IAEA.

### Enforcement

#### § 75.51 Enforcement.

(a) An injunction or other court order may be obtained prohibiting any violation of any provision of the Atomic Energy Act of 1954, as amended, or Title II of the Energy Reorganization Act of 1974, or any regulation or order issued thereunder. A court order may be obtained for the payment of a civil penalty imposed pursuant to section 234 of the Act for violation of section 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Act, or section 206 of the Energy Reorganization Act of 1974, or any rule, regulation, or order issued thereunder, or any term, condition, or limitation of any license issued thereunder, or for any violation for which a license may be revoked under section 186 of the Act.

Any person who willfully violates any provision of the Act or any regulation or order issued thereunder may be guilty of a crime and, upon conviction, may be punished by fine or imprisonment or both, as provided by law.

(b) The Commission may issue such orders to secure compliance with the provisions of this part or to prohibit any violation of such provisions as may be proper to protect the common defense and security. Enforcement actions, including proceedings instituted with respect to Agreement State licensees, will be conducted in accordance with the procedures set forth in Part 2, Subpart B of this chapter. Only NRC licensees, however, are subject to license modification, suspension, or revocation as such as a result of such enforcement actions.



**UNITED STATES NUCLEAR REGULATORY COMMISSION**  
**RULES and REGULATIONS**

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

**PART  
150**

**EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY  
IN AGREEMENT STATES UNDER SECTION 274**

**GENERAL PROVISIONS**

- Sec.  
150.1 Purpose.  
150.2 Scope.  
150.3 Definitions.  
150.4 Communications.  
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**EXEMPTIONS IN AGREEMENT STATES**

- 150.10 Persons exempt.  
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**CONTINUED COMMISSION REGULATORY  
AUTHORITY IN AGREEMENT STATES**

- 150.14 Commission Regulatory Authority  
for Physical Protection.  
150.15 Persons not exempt.  
150.16 Submission to Commission of nuclear  
material transfer reports.  
150.17 Submission to Commission of source  
material transfer reports.  
150.17a Compliance with requirements of  
US/AIEA safeguards agreement.  
150.18 Control and accounting procedures for  
tritium.  
150.19 Submission to Commission of tritium  
reports.

**RECIPROCITY**

- 150.20 Recognition of State licenses.  
150.21 Transportation of special nuclear  
material by aircraft.

**ENFORCEMENT**

- 150.30 Violations.

**AUTHORITY:** The provisions of this Part 150 issued under sec. 161b, 68 Stat. 948, sec. 274, 73 Stat. 688, 42 U.S.C. 2201(b), 2021, Sec. 201(f), Pub. L. 93-438, 88 Stat. 1243, 42 U.S.C. 5841.

Section 150.17a also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). For purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273), § 150.17a issued under Sec. 161b., 68 Stat. 950 (42 U.S.C. 2201(b)).

**GENERAL PROVISIONS**

**§ 150.1 Purpose.**

The regulations in this part provide certain exemptions to persons in Agreement States from the licensing requirements contained in Chapters 6, 7, and 8 of the Act and from the regulations of the Commission imposing re-

quirements upon persons who receive, possess, use or transfer byproduct material, source or special nuclear material in quantities not sufficient to form a critical mass; and to define activities in Agreement States over which the regulatory authority of the Commission continues. The provisions of the Act, and regulations of the Commission apply to all persons in Agreement States engaging in activities over which the regulatory authority of the Commission continues.

**§ 150.2 Scope.**

The regulations in this part apply to all States that have entered into agreements with the Commission or the Atomic Energy Commission pursuant to subsection 274b of the Act.

**§ 150.3 Definitions.**

As used in this part:

(a) "Act" means the Atomic Energy Act of 1954 (68 Stat. 919) including any amendments thereto;

(b) "Agreement State" means any State with which the Commission or the Atomic Energy Commission has entered into an effective agreement under subsection 274b. of the Act.\* "Non-agreement State" means any other State.

(c) "Byproduct material" means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material; or (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, including discrete surface wastes resulting from solution extraction processes. Underground ore bodies depleted by such solution extraction operations do not constitute "byproduct material" within the definition."

(d) "Commission" means the Nuclear Regulatory Commission or its duly authorized representatives;

(e) "Government agency" means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government.

(f) "Person" means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, any political subdivision of any political entity within a State, and any legal successor, representative, agent or agency of the foregoing other than Government agencies;

(g) "Production facility" means (1) any equipment or device determined by rule of the Commission to be capable of the production of special nuclear material in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public; or (2) any important component part especially designed for such equipment or devices as determined by the Commission;

(h) "Source material" means (1) uranium, thorium, or any other material which is determined by the Commission pursuant to the provisions of section 61 of the Act to be source material; or (2) ores containing one or more of the foregoing materials, in such concentration as the Commission may by regulation determine from time to time;

(i) "Special nuclear material" means (1) plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material, but does not include source material; or

\*Amended 31 FR 15145.



# PART 150 • EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY...

(2) any material artificially enriched by any of the foregoing but does not include source material;

(j) "State" means any State, Territory, or possession of the United States, Puerto Rico, and the District of Columbia;

(k) "Utilization facility" means (1) any equipment or device, except an atomic weapon, determined by rule of the Commission to be capable of making use of special nuclear material in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public, or peculiarly adapted for making use of atomic energy in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public; or (2) any important component part especially designed for such equipment or device as determined by the Commission

## § 150.4 Communications.

Except where otherwise specified in this part, all communications and reports concerning the regulations in this part should be addressed to the Executive Director for Operations, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Communications and reports may be delivered in person at the Commission's offices at 1717 H Street, N.W., Washington, D.C. or at 7920 Norfolk Avenue, Bethesda, Maryland.

## § 150.5 Interpretations.

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by an officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

## EXEMPTIONS IN AGREEMENT STATES

### § 150.10 Persons exempt.

Except as provided in §§ 150.15, 150.16, 150.17, 150.17a, 150.18 and 150.19, any person in an Agreement State who manufactures, produces, receives, possesses, uses, or transfers byproduct material, source material, or special nuclear material in quantities not sufficient to form a critical mass is exempt from the requirements for a license contained in Chapters 6, 7, and 8 of the Act, re-

\* Amended 45 FR 18905

gulations of the Commission imposing licensing requirements upon persons who manufacture, produce, receive, possess, use, or transfer such materials, and from regulations of the Commission applicable to licensees. The exemptions in this section do not apply to agencies of the Federal government as defined in § 150.3.

### § 150.11 Critical mass.

(a) For the purposes of this part, special nuclear material in quantities not sufficient to form a critical mass means uranium enriched in the isotope U-235 in quantities not exceeding 350 grams of contained U-235; uranium-233 in quantities not exceeding 200 grams; plutonium in quantities not exceeding 200 grams; or any combination of them in accordance with the following formula: For each kind of special nuclear material, determine the ratio between the quantity of that special nuclear material and the quantity specified above for the same kind of special nuclear material. The sum of such ratios for all kinds of special nuclear materials in combination shall not exceed the limitation and are within the formula, as follows:

$$\frac{175 \text{ (grams contained U-235)}}{350} + \frac{50 \text{ (grams U-233)}}{200} + \frac{50 \text{ (grams Pu)}}{200} = 1$$

(b) To determine whether the exemption granted in § 150.10 applies to the receipt, possession or use of special nuclear material at any particular plant or other authorized location of use, a person shall include in the quantity computed according to paragraph (a) of this section the total quantity of special nuclear material which he is authorized to receive, possess or use at the plant or other location of use at any one time.

### § 150.14 Commission Regulatory Authority for Physical Protection.

Persons in Agreement States possessing, using or transporting special nuclear material of low strategic significance in quantities greater than 15 grams of plutonium or uranium-233 or uranium-235 (enriched to 20 percent or more in the U-235 isotope) or any combination greater than 15 grams when computed by the equation grams = grams uranium-235 + grams plutonium + grams uranium-233 shall meet the physical protection requirements of § 73.67 of 10 CFR Part 73

## CONTINUED COMMISSION REGULATORY AUTHORITY IN AGREEMENT STATES

### § 150.15 Persons not exempt.

(a) Persons in Agreement States are not exempt from the Commission's licensing and regulatory requirements with respect to the following activities:

(1) The construction and operation of any production or utilization facility. As used in this subparagraph (1), "operation" of a facility includes, but is not limited to (i) the storage and handling of radioactive wastes at the facility site by the person licensed to operate the facility, and (ii) the discharge of radioactive effluents from the facility site.

(2) The export from or import into the United States of byproduct, source, or special nuclear material, or of any production or utilization facility.

(3) The disposal into the ocean or sea of byproduct, source, or special nuclear waste materials, as defined in regulations or orders of the Commission. For purposes of this part, ocean or sea means any part of the territorial waters of the United States and any part of the international waters.

(4) The transfer, storage or disposal of radioactive waste material resulting from the separation in a production facility of special nuclear material from irradiated nuclear reactor fuel. This subparagraph (4) does not apply to the transfer, storage, or disposal of contaminated equipment.

(5) The disposal of such other byproduct, source, or special nuclear material as the Commission determines by regulation or order should, because of the hazards or potential hazards thereof, not be so disposed of without a license from the Commission.

(6) The transfer of possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source material or byproduct material whose subsequent possession, use, transfer, and disposal by all other persons are exempted from licensing and regulatory requirements of the Commission under Parts 30 and 40 of this chapter.

» (7) The storage of spent fuel in an independent spent fuel storage installation (ISFSI) licensed pursuant to Part 72 of this Chapter.

UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

**PART  
170**

**FEES FOR FACILITIES AND MATERIALS LICENSES...  
AND OTHER REGULATORY SERVICES  
UNDER THE ATOMIC ENERGY ACT OF 1954, AS AMENDED \***

**PROPOSED RULE MAKING**

invited to submit written comments to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments on the proposed amendment may be examined in the Commission's Public Document Room at 1717 H Street NW., Washington, D.C.

**FOR FURTHER INFORMATION CONTACT:** Mr. W. O. Miller, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, phone 301/492-7225.

**SUPPLEMENTARY INFORMATION:** Section 71.51(a) of the Commission's regulations provides that persons are to establish, maintain and execute a quality assurance program satisfying the applicable criteria of Appendix E, "Quality Assurance Criteria for Shipping Packages for Radioactive Material." Also, the person is to identify which requirements in Appendix E are applicable to the package and described to the Commission how they will be satisfied. The quality assurance (QA) program applies to the design, fabrication, assembly, testing, use (preparation of packages for shipments) and maintenance of transportation packages. Where the staff determines that the licensee's QA program satisfies the applicable criteria of Appendix E of Part 71, a certificate of approval is issued for the program.

The proposed amendment to 10 CFR 170.31 would add a new Subcategory F, to Category 11 "Transportation of radioactive material." Subcategory 11.F, would require persons filing QA plans for review to pay an application fee of \$160; and a review fee based on the actual costs of the review, but with a minimum fee of \$160.

The requirements of Appendix E of 10 CFR Part 71, which became effective October 18, 1977, affect approximately 1,000 persons who package and ship fissile material and Type B quantities.

The affected persons include industrial radiographers, sealed source and equipment manufacturers, fuel fabricators, and licensed utilities. Although Part 71 specified that persons were to file a description of their quality assurance program by January 1, 1979, many have not complied with this provision.

Persons who file for review of QA program descriptions prior to the effective date of the final rule in this proceeding will not be charged fees for this review.

Pursuant to Title V of the Independent Offices Appropriation Act of 1952 (31 U.S.C. 483a.) and Sections 552 and 553 of Title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Part 170, are contemplated:

Section 170.31 is amended by adding a new subcategory F to Category 11., by adding a new footnote 8, and by renumbering former footnote 8 (Charge will be . . . ) which will become footnote 9, to read as follows:

§ 170.31 Schedule of fees for materials licenses and other regulatory services.

| Category of material's license                                 | Type of fee           | Fee           |
|----------------------------------------------------------------|-----------------------|---------------|
| • • • • •                                                      |                       |               |
| 11. Transportation of radioactive materials.                   |                       |               |
| • • • • •                                                      |                       |               |
| F. Review of quality assurance programs for shipping packages. | Application . . . . . | \$160.        |
| • • • • •                                                      | Review . . . . .      | *Actual cost. |
| • • • • •                                                      |                       |               |

\*Charge to be separately determined by the Commission, taking into account the professional manpower required to conduct the review multiplied by the applicable man-hour rate, less the \$160 application fee. In no event will the fee be less than \$160. The fee for the renewal of a certificate of approval which requires administrative review only shall be assessed a fixed charge of \$160.

44 FR 50015  
Published 8/24/79  
Comment period expires 10/24/79

*Criteria Relating to Uranium Mill Tailings and Construction of Major plants.*

See Part 30 Proposed Rule Making.

45 FR 20899  
Published 3/31/80  
Comment period expires 4/30/80

**10 CFR Part 170**

**Licenses and Other Regulatory Services Under the Atomic Energy Act of 1954; Revision of Materials Fee Schedules**

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The U.S. Nuclear Regulatory Commission is proposing to amend its regulations in 10 CFR Part 170 to add a new fee Category 11.F to § 170.31 on schedule of fees for materials licenses and other regulatory services. The new category would impose fees for the review of quality assurance programs for radioactive material shipping packages required by 10 CFR Part 71.

**DATE:** Comment period expires April 30, 1980.

**ADDRESSES:** Interested persons are

## PART 170 • PROPOSED RULE MAKING

➤ 45 FR 74493  
Published 11/10/80  
Comment period expires 12/8/80

### 10 CFR Part 170

#### Fees for Review of Applications

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The Commission is proposing an interpretative rule to clarify that fees for review will be charged, as appropriate, when review of an application is completed, whether by issuance of a permit, license, or other approval, or by denial or withdrawal of an application, or by any other event that brings active Commission review of the application to an end.

**DATES:** Comments are due by December 8, 1980.

**FOR FURTHER INFORMATION CONTACT:** William O. Miller, Chief, License Fee Management Branch, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Telephone: 301-492-7225.

**SUPPLEMENTARY INFORMATION:** Based upon the language of 10 CFR 170.12(b) and of footnote 3 to 10 CFR 170.21 (footnote 3 reads in pertinent part as follows: "When review of the permit, license, approval, or amendment is complete, the expenditures for professional manpower and appropriate support services will be determined and the resultant fee assessed, but in no event will the fee exceed that shown in the schedule of facility fees. \* \* \*") the Commission has been billing power reactor construction permit applicants for the actual costs of review of their applications up to the time the applicant withdraws the application from Commission consideration.

It was the Commission's intent in promulgating 10 CFR Part 170 that charges be assessed whenever a review is brought to an end, whether by reason of issuance of a license, a denial of an application, or by its withdrawal, suspension or postponement. Such charges are authorized and directed under Title V of the Independent Offices Appropriation Act of 1952 (31 U.S.C. 483a) and supported by judicial decision upholding charges for government services rendered to applicants based upon cost to the agency. See e.g., *Mississippi Power and Light v. NRC*, 801 F.2d 223 (1979) cert. denied 444 U.S. 1102 (1980), and cases cited therein. The fee

guidelines approved by the Commission and the Court of Appeals in *Mississippi Power and Light v. NRC*, supra, make clear the Commission's position that the review of an application at the request of a recipient of the service, is a service for which a charge may be made. In the guidelines, fees may be assessed for services rendered at the request of an applicant whether or not these services are linked to or result in the issuance of a permit or license. For example, the guidelines support the inclusion in the fee schedule of "special projects and reviews" that do not result in issuance of permits, licenses or approvals but are yet subject to a fee for the service based upon actual cost. (10 CFR 170.21, Schedule F). The review given a power reactor application that does not end in a permit or license is analogous to a special project with respect to the work performed and the service rendered to the applicant.

The interpretative amendments to 10 CFR 170.12 are intended to remove any possibility of misunderstanding the Commission's intent in appropriate cases to charge fees on withdrawal or denial of an application, and in cases of suspension or postponement of action on an application. The Commission will consider billing an applicant for costs incurred in the processing and review of an application upon either a statement of intent by the applicant to postpone further review effort or a delay in the construction schedule which causes the staff to postpone further review. In the event such an application is reinstated without significant changes, or review effort recommenced, subsequent charges will accrue only from the time of reinstatement or recommencement of review effort. In such cases the aggregate of charges for review of applications covered by the actual cost principle will not exceed the scheduled amount for the class of facility.

Although the impetus for issuing this interpretative rule stems from the withdrawal of power reactor construction permit applications, the interpretative amendments also apply to certain materials licenses applications subject to the actual cost principle as stated in footnote 4 to 10 CFR 170.31. These are primarily major fuel processing and fabrication plants, waste storage and disposal facilities, spent fuel storage facilities, uranium milling plants, evaluation of casks and packages, and special projects.

Since the new language merely restates what the Commission's rule has been on collecting fees for withdrawn or otherwise terminated applications since the promulgation of revisions to 10 CFR Part 170 (43 FR 7418), the clarifying language, if adopted as proposed, will

be applicable to all license applications on file before the Commission on or after March 23, 1978, the effective date of the current version of 10 CFR Part 170, as well as to those received after adoption of the clarifying language.

Although the rules' changes in these amendments are interpretative only and could be published effective immediately without notice and comment under 5 U.S.C. 553(b), and without the customary 30 days notice under 5 U.S.C. 553(d), the Commission has decided to solicit public comment and, therefore, is proceeding by normal notice and comment rulemaking procedure prior to adopting the clarifying language.

Pursuant to Title V of the Independent Offices Appropriation Act of 1952 (31 U.S.C. 483a), the Atomic Energy Act of 1954, as amended, and Sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that adoption of the following amendments to Part 170, Title 10, Chapter 1, Code of Federal Regulations, is contemplated.

1. Paragraphs 170.12(b), (e), and (f) of 10 CFR 170.12 are amended to read as follows:

#### § 170.12 Payment of fees.

(b) *License fees.* Fees for review of applications for construction permits, operating licenses, manufacturing licenses, and materials licenses, are payable upon notification by the Commission when the review of the project is completed. For the purposes of this Part the review of a project is completed when a permit or license is issued, or an application for a permit or license is denied, withdrawn, suspended, or action on the application is postponed.

(e) *Approval Fees.* fees for review of applications for spent fuel cask and shipping container approvals, standardized spent fuel facility design approvals, and construction approvals are payable upon notification by the Commission when the review of the project is completed. For the purposes of this Part the review of a project is completed when the approval is issued, or the application for an approval is denied, withdrawn, suspended, or action on the application is postponed. Fees for facility reference standardized design approvals will be paid in five (5) installments based on payment of 20 percent of the approval fee (see footnote 3 § 170.21) as each of the first five (5) units of the approved design are referenced in an application(s) filed by a utility or utilities. In the event the standardized design approval application is denied, withdrawn,

## PART 170 • PROPOSED RULE MAKING

suspended, or action on the application is postponed, fees will be collected when the review is completed and the five (5) installment payment procedure will not apply.

(f) *Special Project Fees.* Fees for review of special projects are payable upon notification by the Commission when the review of the project is completed. For the purposes of this Part the review of the project is completed upon notification by the staff that it has finished its review, upon withdrawal of the request, or suspension or postponement of further review.

2. A new paragraph is added to § 170.12 of Part 170 to read as follows:

### § 170.12 Payment of fees.

(i) this section applies to all applications for licenses, permits approvals or requests for review of special projects on file with the Commission on or after March 23, 1978.





## POLICY STATEMENTS

improvements.

On May 15, 1980, after review of the last version of the Action Plan, the Commission approved the staff's recommendations on those items in the Action Plan that should be implemented or considered over the long term to further enhance safety and also approved a list of requirements for new operating licenses which the staff recommended for imposition in current operating license reviews. On June 5, 1980, the Commission provided further guidance to the NRC staff on implementing the new operating license requirements of the NRC Action Plan. The Office of Nuclear Reactor Regulation was directed to proceed with safety evaluations using the list of new requirements and, in cases where Atomic Safety and Licensing Boards (ASLBs) have been awaiting NRC staff actions, preparation and presentation of testimony before Boards in individual operating license cases.

On June 16, 1980, the Commission issued a Statement of Policy (45 FR 41738) as further Commission guidance on operating licenses for the Boards and the NRC staff. Accompanying this policy was a report, "TMI-Related Requirements for New Operating Licenses (NUREG-0694)." The Commission decided that current operating license applications should be measured against the regulations, as augmented by the list of new requirements in NUREG-0694, and that the remaining items of the Action Plan should be addressed through the normal process for development and adoption of new requirements rather than through immediate imposition on pending applications.

The staff has been directed to seek public comment on the TMI-2 Action Plan for the purpose of developing further refinements, particularly with respect to the establishment of priorities for addressing those remaining items in the Action Plan not included in the list of new requirements for operating licenses. In the event that public comments lead the staff to conclude that substantive changes to the list of requirements for new operating licenses are necessary, the Commission will be promptly notified.

45 FR 65726

Published 10/3/80

Comment period expires 11/17/80

Correction published 11/3/80

### Evaluation of Agreement State Radiation Control Programs: Proposed General Statement of Policy

AGENCY: U.S. Nuclear Regulatory Commission.

**ACTION:** Proposed general statement of policy.

**SUMMARY:** The Nuclear Regulatory Commission proposes to adopt as a general statement of policy the recently revised "Guide for Evaluation of State Radiation Control Programs Under Agreement With the U.S. Nuclear Regulatory Commission Pursuant to Section 274 of the Atomic Energy Act of 1954, As Amended", February 1, 1980. The revised Guide which was prepared by the NRC staff incorporates new criteria and guidelines for acceptable practice by Agreement States. This proposed statement of policy is being issued to inform the public of the criteria and guidelines which the Commission intends to use in evaluating Agreement State radiation control programs. The Commission expects that further revisions may be needed and is, accordingly, requesting comments on the proposed statement of policy including the criteria and guidelines for acceptable practice by Agreement States.

**DATES:** Comments are due on or before November 17, 1980.

**ADDRESSES:** All interested persons who desire to submit written comments or suggestions for consideration in connection with this proposed statement of policy should send them to Director, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Copies of public comments on this proposed policy statement may be examined at the Commission's Public Document Room at 1717 H Street, N.W., Washington, D.C.

**FOR FURTHER INFORMATION CONTACT:** John R. McGrath, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555—Telephone: 301-492-7767.

**SUPPLEMENTARY INFORMATION:** Section 274 of the Atomic Energy Act of 1954, as amended, was enacted in 1959 to provide a statutory means by which the NRC (then the AEC) could relinquish to the States part of its regulatory authority. The mechanism for the transfer of the Commission's regulatory authority is by an agreement between the Governor of a State and the Commission. Thus far, 26 States have entered into such agreements.<sup>1</sup>

Before entering into an agreement, the NRC is required to make a finding that the State's radiation control program is compatible with the Commission's and

that the State program is adequate to protect the public health and safety. Section 274j of the Atomic Energy Act provides that the NRC may terminate its agreement with a State if the Commission finds that such termination is necessary to protect the public health and safety or the State has not complied with one or more of the requirements of Section 274. In May 1985, the Commission adopted a policy of making an annual redetermination of the Agreement States' adequacy and continued compatibility with the NRC program. These determinations are primarily based on review meetings during which the individual State regulatory programs are evaluated on the basis of the "Guide for Evaluation of Agreement State Radiation Control Programs." Other factors such as information obtained through the NRC-State exchange-of-information program are also considered. Under the exchange-of-information program States provide to the NRC copies of all licensing actions taken by the State. In addition, the program involves exchanging information between the NRC and the States on the development of new regulations, and revisions to licensing and compliance policy, practices, and procedures. The States also provide information on incidents and other abnormal occurrences. As a result of the review of a State program, the NRC determines that the Agreement State's program is either:

- (1) Adequate to protect the public health and safety; or
- (2) Inadequate to protect the public health and safety.

A program may be adequate to protect the public health and safety although in need of improvement in specified areas or NRC may be unable to make a finding at the time of the review because of unresolved items or inadequate information necessitating a follow-up review. In such cases NRC follows up on these matters by correspondence, follow-up reviews or at the time of the next review.

A determination is also made that the program is either:

- (1) Compatible with the NRC Regulatory program in areas related to the public health and safety; or
- (2) Incompatible with the NRC Regulatory program;

or NRC is unable to make a finding at the time of the review because of unresolved items or inadequate information. A dispositive finding is made at the time the staff submits a consolidated assessment to the Commission in an annual report on all Agreement States.

In making a finding of adequacy, the NRC considers areas of the State

<sup>1</sup> Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Kansas, Kentucky, Louisiana, Maryland, Mississippi, Nebraska, Nevada, New Hampshire, New Mexico, New York, North Carolina, North Dakota, Oregon, Rhode Island, South Carolina, Tennessee, Texas and Washington.

## POLICY STATEMENTS

program which are critical to its primary function, i.e., protection of the public health and safety. For example, a State that does not have qualified personnel, fails to take adequate licensing actions or has no inspection program, would not be considered to have a program adequate to protect the public health and safety. Basic radiation protection standards, such as exposure limits, directly affect the States' ability to protect public health and safety. The NRC feels that it is important to strive for a high degree of uniformity in technical definitions and terminology, particularly as related to units of measurement and radiation dose. Maximum permissible doses and levels of radiation and concentrations of radioactivity in unrestricted areas as specified in 10 CFR Part 20 are considered to be important enough to require States to be essentially equivalent in this area in order to protect public health and safety. Basic radiation standards are also considered to be matters of compatibility. Certain administrative procedures, such as those involving the licensing of products containing radioactive material intended for interstate commerce, are considered to be matters of compatibility.

If an Agreement State has adequate standards, compatible program procedures, and has acceptable performance NRC makes a finding of adequacy and compatibility. It is possible that a State program could have up-to-date regulations, all proper procedures, and adequate staff, but still fail to perform the necessary work. In this case a program could be found to be inadequate to protect the public health and safety, yet compatible with the Commission's program. In the worst case, a program can be found to be both inadequate and incompatible with the NRC program.

Section 274g of the Act directs the Commission " . . . to cooperate with the States in the formulation of standards for protection against hazards of radiation to assure that State and Commission programs for protection against hazards of radiation will be coordinated and compatible." Section 274j gives the Commission the authority to terminate or suspend an agreement with a State. Before the Commission can take such action, it must find that "(1) such termination or suspension is required to protect the public health and safety or (2) the State has not complied with one or more of the requirements of this section." The formal agreement, which the Governor signs, pledges the State to "use its best efforts . . . to assure that the State's program will continue to be compatible."

The results of Agreement State program reviews are reported to the radiation control program director and

upper level State management. In addition to the findings on adequacy and compatibility, comments and recommendations for improvement of the program may also be provided.

The Commission proposes to adopt as its general statement of policy a revised "Guide for Evaluation of Agreement Statement Radiation Control Programs Under Agreement With The U.S. Nuclear Regulatory Commission Pursuant to Section 274 of the Atomic Energy Act of 1954, As Amended", February 1, 1980, which identifies six essential elements of a radiation control program. These elements are: Organization, Administration, Personnel, Regulations, Licensing, and Compliance. The Guide divides each element into component parts or indicators, and establishes guidelines for acceptable practice under each indicator. The Guide includes 35 indicators and 102 guidelines for acceptable practice. Obviously, the indicators and guidelines in the Guide are not all of equal importance.

➤ The revised Guide also utilizes categories of indicators. The purpose of the categories is to indicate the potential seriousness of deficiencies in the program areas addressed by the various indicators. Category I indicators reflect a State program's ability to adequately protect the public health and safety. Significant problems in meeting the guides for acceptable practice for these indicators probably means the State program has a serious need for improvement. If significant problems exist in more than one of these areas, then the need for improvements may be critical. Category II indicators address functions and activities which support a States' program. Good performance in meeting the guidelines for these indicators is considered essential if the State is to avoid significant problems in conducting an effective program to protect the public health and safety. Category III indicators address those areas of a State program which are considered highly desirable features of a soundly based, comprehensive program for controlling agreement materials, but which have little or no direct bearing on the State's ability to protect the public health and safety. These categories of indicators reflect the potential seriousness of deficiencies in various program areas. NRC obviously uses discretion in reviewing deficiencies within the various categories.

It is the NRC's intention to use these categories in the following manner. In reporting findings to State management, the NRC will indicate the category of each comment made. If no significant Category I comments are provided, this will indicate that the program is adequate to protect the public health and safety. If at least one significant Category I comment is provided, the

State will be notified that the program deficiency may seriously affect the State's ability to protect the public health and safety and should be addressed on a priority basis. When more than one significant Category I comment is provided, the State will be notified that the need of improvement in the particular program areas is critical. The NRC would request an immediate response, and perform a follow-up review of the program within six months. If the State program has not improved or if additional deficiencies have developed, the NRC may institute proceedings to suspend or revoke all or part of the Agreement. Category II comments would concern functions and activities which support the State program and therefore would not be critical to the State's ability to protect the public. The State will be asked to respond to these comments and the State's actions will be evaluated during the next regular program review. Category III deficiencies likewise will be brought to the State's attention and the State's actions evaluated during the next regular review.

➤ On November 13, 1979, a draft of the revised Guide was sent to the Agreement States for comment. The draft revised Guide was also reviewed by NRC staff offices. Comments were received from fifteen Agreement States. The States were generally supportive of the current NRC review program but were opposed to codification of the criteria. One State commented that the primary indicators of a State's ability to protect the public health and safety are the exposure experience of radiation workers, patients in nuclear medicine and the public in the vicinity of licensed facilities and suggested that the Commission develop standard methods for the assessment of such exposures.

Other State comments and concerns were as follows:

1. What constitutes compatibility?
2. The criteria for the administrative aspects of the Agreement State program are too detailed.
3. The criteria should also address the political environment of the program such as the effect of public opinion on the operation of the program.
4. During the review process contact with the Governor and/or the State Legislature should normally be made.
5. Much of the periodic review is repetitive and could be streamlined.
6. One State questioned the NRC's ability to meet the criteria it uses to evaluate the States.

Some general comments generated by the Commission staff were as follows:

1. The technical qualifications of the Agreement State staff to handle a broad range of safety matters which could arise in Agreement State programs should be improved.
  2. The NRC should use performance data, such as incident reports, to assess the effectiveness of State programs.
- With regard to the development of specific indicators related to exposure experience of radiation workers, patients in nuclear medicine and the public in the vicinity of licensed facilities and use of performance data

## POLICY STATEMENTS

such as incident reports the Commission is seeking comments on the following:

1. What should be the proper reference indicator(s)—average dose, total person-rem, number of overexposures? Should the indicator(s) be related to numbers of licensees, number of licensee employees, number of radioactive material manipulations, size (curie quantity) of material manipulations, etc.

2. Are data currently available to regulatory officials upon which such indicators could be fairly based?

3. If such data are not available, what legal and regulatory constraints, if any, exist in collecting the necessary information?

4. What are the estimated levels of effort necessary by each State to collect the necessary reference data assuming there are no legal or regulatory constraints?

5. What other factors might affect the development of such indicators?

The Commission considered an NRC staff recommendation to conduct a public hearing on the promulgation of the Policy Statement. The Commission noted the potential advantages of such a hearing but decided to defer a decision on the matter pending receipt of public comments.

Although the Commission proposes to adopt the revised "Guide for Evaluation of Agreement State Radiation Control Programs" as a general statement of policy, it recognizes that there may be aspects of the policy statement which are susceptible of further improvement and that new elements may need to be added to the review process as times and situations change. Accordingly, the Commission is inviting comments from the general public on the following issues:

1. What additional criteria, if any, should be considered in the evaluation of Agreement State programs? Some States have suggested, for example, that NRC should use population and occupational exposure data to evaluate the effectiveness of State regulatory programs.

2. What, if any, of the existing guidelines are not appropriate criteria by which to evaluate the Agreement States? How should they be modified? The guidelines for acceptable practice cover a wide range of topics. Some guidelines are of an administrative nature and it has been suggested that these guidelines may not have a bearing on the effectiveness of a State program.

3. In what additional ways can the NRC oversight of Agreement States be strengthened? The Uranium Mill Tailings Act of 1978 requires States to follow specific procedures in the licensing of mill tailings. This was a significant extension of requirements on Agreement States and it has been suggested that other Agreement State program areas should be under closer scrutiny by NRC.

4. Should Agreement State reviews be conducted by a third party (another Federal agency, consultant, or other

organization) and would such a review result in improved State regulatory programs?

5. How should the results of the reviews be reported? At present, results of review meetings are reported to State health officers or an equivalent official in State government. After reviewing the NRC Agreement State program, the General Accounting Office suggested that meeting results be routinely reported to State governors. Individual States have also suggested such contacts as well as contacts with State legislatures. To date NRC has involved the office of the Governor in selected cases and does not hesitate to do so when deemed necessary.

6. Are there other comments and concerns relating to Agreement State-NRC relations which should be considered?

Dated at Washington, D.C., this 29th day of September 1980.

For the U.S. Nuclear Regulatory Commission.

Samuel J. Chilk,

Secretary of the Commission.

### Proposed General Statement of Policy

**Guide for Evaluation of State Radiation Control Programs Under Agreement With the U.S. Nuclear Regulatory Commission Pursuant to Section 274 of the Atomic Energy Act of 1954, as Amended**

February 1, 1980.

### Introduction

Section 274 of the Atomic Energy Act of 1954, as amended, requires that Agreement States' radiation control programs must remain adequate to protect the public from radiation hazards. In addition, the U.S. Nuclear Regulatory Commission (NRC) and the States pledge to use their best efforts to maintain compatible programs under the terms of each Agreement. The NRC has for many years periodically reviewed Agreement State programs to determine their adequacy to protect the public health and safety and compatibility with the NRC Program. Section 274j of the Atomic Energy Act of 1954, as amended, was amended on November 8, 1978 to require the periodic review of Agreement State programs by NRC. Although the Act specified no frequency for such reviews the NRC believes the interval between reviews should not exceed 18 months.

Information on the performance of Agreement State programs is obtained in several ways, the principal method being periodic review meetings with the States during which the essential elements of an RCP are reviewed and discussed with various levels of State RCP personnel. During the review process, each State program is evaluated on an individual basis against the criteria and guidance provided, taking into consideration individual

State program differences such as size, scope, complexity of licensed activities, needs, and requirements of the program.

The Guide for Evaluation of State Radiation Control Programs has been prepared to assist the NRC in determining the adequacy and compatibility of State Radiation Control Programs (RCP) and to provide basic guidance to the States as to what is considered acceptable practice in connection with the administration of an RCP. The Guide contains six Sections, each dealing with one of the essential elements of an RCP which are: Organization, Management and Administration, Personnel, Regulations, Licensing, and Compliance. Each Section contains (a) a summary of the general significance of the program element, (b) indicators which must be considered to determine adequacy, and (c) guidance for acceptable practice. This Guide provides for a categorization of the relative importance of each indicator and is further discussed below.

Upon determining the status of the indicators, the reviewer must make a judgment as to the adequacy of the State's practice by comparison with the guidance provided. The relative importance of each indicator must be judged in arriving at a final determination of the overall adequacy of a State's program to protect the public health and safety and its compatibility with the Commission's program for the regulation of similar materials and using the guidance discussed below.

As a result of the review of a State program, the NRC determines that the Agreement State's program is either:

(1) Adequate to protect the public health and safety;

or

(2) Inadequate to protect the public health and safety; or NRC may be unable to make a finding at the time of the review because of unresolved items or inadequate information necessitating a follow-up review. A program may be adequate to protect the public health and safety although in need of improvement in specified areas. In such cases NRC follows-up on these matters by correspondence, follow-up reviews or at the time of the next review.

A determination is also made that the program is either:

(1) Compatible with the NRC Regulatory program in areas related to the public health and safety; or

(2) Incompatible with the NRC Regulatory program; or NRC is unable to make a finding at the time of the review because of unresolved items or inadequate information.

The Guide is not intended to be a standard and its use will be limited to that intended in the use of the term

## POLICY STATEMENTS

"Guide." As times and situations change and as new elements are added to the review process as a result of the continuing review of State programs, changes will be made in the Guide. Some new indicators and guides are included in this revision as relates to uranium mill States. However, additional post agreement review guidance will be developed for these States prior to November 8, 1981, the date when Agreement State programs for regulating uranium mills must conform to the requirements set forth in the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA).

### *Categories of Indicators Used To Determine Adequacy of Agreement State Programs*

During the review process, each State program is evaluated on an individual basis against the indicators and guidance, taking into consideration individual State program differences such as size, scope, complexity of licensed activities, needs, and requirements of the program. The indicators are recognized as not having equal importance when making a judgment as to adequacy of the State's program, but formal guidance has not previously been provided on the relative importance of each indicator. Formal guidance would be desirable from the points of view of (1) the Agreement States, (2) NRC staff involved in evaluations, (3) the Commission which, as an agency, makes formal determinations of adequacy and compatibility, and (4) the public. Three categories of indicators have been established.

#### *Category I*

Category I indicators reflect a State program's ability to adequately protect the public health and safety. Significant problems in meeting the guides for acceptable practice for these indicators probably mean the State program has a serious need for improvement. If significant problems exist in more than one of these areas, then the need for improvements may be critical.

Category I Indicators are:

- Legal Authority
- Emergency Plans
- Compatibility of Regulations (Basic Radiation Protection Standards-dose standards and effluent limits, Part 19, and UMTRCA Only)
- Personnel Qualifications
- Technical Quality of Licensing Actions
- Adequacy of Product Evaluations
- Status of Inspection Program
- Inspectors' Performance and Capability

- Response to Incidents and Alleged Incidents
- Enforcement Procedures
- Equipment Failure

#### *Category II*

Category II Indicators address functions and activities which support the program. Good performance in meeting the guidelines for these indicators is considered essential if the State is to avoid significant problems in implementing an effective program to protect the public health and safety.

Category II Indicators are:

- Location of RCP Within State Organization
- Internal Organization of RCP
- Legal Assistance
- Budget
- Administrative Procedures
- Planning
- Laboratory Support
- Number of Personnel
- Personnel Duties
- Training
- Salaries
- Staff Turnover
- Compatibility of Regulations (Other Than Basic Radiation Protection Standards, Part 19 and UMTRCA)
- Updating Regulations
- Licensing Procedures
- Quality Assurance (Licensing)
- Inspection Procedures
- Inspection Frequency
- Inspection Reports
- Independent Measurements

#### *Category III*

Category III Indicators address those areas of a State program which are considered highly desirable features of a soundly based, comprehensive program for controlling agreement materials.

Category III Indicators are:

- Technical Advisory Committees and Consultants
- Office Facilities, Equipment and Support Services
- Public Information
- Recruiting
- Medical Advisory Committee

#### *Guidance for Using and Interpreting Categories of Indicators and Their Guides for Acceptable Practice*

Reviews of Agreement State programs usually result in comments and recommendations being made to the State which are always intended to improve the State's program. Most comments are developed using the Guides for Acceptable Practice as

criteria.\* Many Indicators have multiple guides. Comments on the need for improvements with reference to a specific guide will not necessarily mean a major problem exists within the Indicator area.

As an example, a Category I Indicator is Status of Inspection Program: A State having a large backlog of overdue inspections may have a serious problem.\*\* In a State having no backlog, however, a reviewer may nonetheless comment on the need for improving the statistical information to permit better assessment of the status of the inspection program (a Guide for Acceptable Practice). As another example, minor comments may be made by a reviewer on technical aspects of State licensing actions without having to conclude that a serious problem exists in this Indicator area.

The purpose of categorizing the Indicators is to make the reviewer and the State, both aware of the *potential significance* of comments in specific Indicator areas. The reviewer must exercise judgment in concluding whether or not serious problems exist, taking into consideration the nature of the comments, past history, size of the problem, needs and requirements of the State's programs, and the response of the State to the specific comments and recommendations offered by the reviewer.

A large number of comments in a specific Indicator area should alert the reviewer and the State that potentially serious problems exist in that Indicator area. Comments directed at significant problems identified in several Category I Indicator areas would strongly suggest the State program may be in critical need of improvement. Category II Indicators frequently can be used to identify underlying problems that are causing, or contributing to, difficulties in Category I Indicators.

In cases where a review results in comments and recommendations for improvements in more than one Category I Indicator area, the reviewer should state whether the comments are major or minor and whether or not the comments as a whole indicate the program is in need of critical improvements. This should be conveyed to the State at the review meeting and in the subsequent letters to the State.

\*Examples of other criteria that may be used are: NRC Branch Positions, Inspection and Licensing Guides, Regulatory Guides, NCRP Reports, etc.

\*\*If the State's inspection priorities call for inspections more frequently than NRC's, a backlog is indicative of a serious problem only if the overdue inspections exceed those required by NRC's priorities.



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to accomplish the purpose of both parties.

### Principles of Cooperation

1. The State and NRC agree to explore together the development of detailed sub-agreements in areas of mutual concern, including siting of nuclear facilities;\* water quality; nuclear facility operation; confirmatory radiological and environmental monitoring around nuclear facilities; decommissioning of nuclear facilities; emergency preparedness planning; response to radiological incidents; security planning; personnel training and exchange; and radioactive material transportation monitoring.

2. Sub-agreements under this Memorandum may provide for activities to be performed by either party under mutually acceptable guidelines and criteria which assure that the needs of both are met. For activities performed by one party at the request of the other party under specific sub-agreements to this Memorandum, either party may explore means by which compensation can be made available to the other party or by which the costs may be shared by the parties.

3. Each party agrees to concurrently supply the other party copies of written correspondence between it and the operator of a nuclear facility in Oregon. This agreement applies to proprietary information except as specifically provided in the attached Sub-agreement 1. Each party stands ready at the request of the other to provide reasonably available technical information.

4. Nothing in this Memorandum is intended to restrict or extend the constitutional or statutory authority of either NRC or the State or to affect or vary the terms of the present agreement (signed by Oregon Governor Mark O. Hatfield and AEC Chairman Glenn T. Seaborg in June 1965) between the state and NRC under Section 274b of the Atomic Energy Act of 1954, as amended.

5. The principal NRC contact under this Memorandum shall be the Director of the Office of State Programs. The principal State contact shall be the Director of the Oregon Department of Energy or his or her designee. Sub-agreements will name appropriate

individuals, agencies or offices as contacts.

6. This Memorandum shall take effect immediately upon signing by the Governor of the State of Oregon and the Executive Director for Operations of the Nuclear Regulatory Commission, and may be terminated upon 30 days written notice by either party.

For the State of Oregon.

Victor Atiyeh,  
Governor.

Dated at Salem, Oregon this 19th day of January 1980.

For the United States Nuclear Regulatory Commission.

Lee V. Gossick,  
Executive Director for Operations.

Dated at Bethesda, Maryland this 4th day of January, 1980.

### Sub-Agreement 1 Between the Oregon Department of Energy and the Nuclear Regulatory Commission

#### Protective Agreement for Exchange of Information

##### A. Scope

This sub-agreement governs the conveyance between the United States Nuclear Regulatory Commission (NRC) and the Oregon Department of Energy (ODOE) of documentary material, or copies thereof, "containing trade secrets or privileged or confidential commercial, financial, security information" ("proprietary information") or inspection manuals regarding nuclear facilities (whether planned, under construction or completed) within the State of Oregon. All such information shall be transmitted and received in confidence by the parties to this sub-agreement.

##### B. Provisions for the Conveyance of Information between the NRC and the ODOE

1. Pursuant to 10 CFR 2.790 and 10 CFR 9.5(a) of the NRC's regulations, the conveyed information is to be withheld from public disclosure.

2. 10 CFR 2.790(b)(6) of the NRC's regulations permits the NRC to allow proprietary information to be subject to inspection under a protective agreement. Additionally, the NRC's disclosure in confidence of NRC inspection manuals by this agreement is expressly not to be construed as a public disclosure of those documents.

3. ODOE agrees to accept and protect from public disclosure the materials provided by the NRC in confidence pursuant to one or more of the following sections of the Oregon revised statutes (ORS): 192.500(2)(b), 192.500(2)(c), 192.500(2)(g), 469.080, 469.090, 469.560, and 469.990.

4. The only persons permitted access to information provided to ODOE by

NRC as a result of a conveyance under this agreement shall be the Director of the ODOE ("Director"), members of the Energy Facility Siting Council (EFSC), the Administrator of the Siting and Regulation Program of the ODOE ("Siting and Regulation Administrator"); and the nuclear engineer staff members of the Siting and Regulation Program ("nuclear engineers").

5. Materials conveyed to the ODOE under this agreement shall be stored in a bank safe deposit box or a locked security cabinet or safe to which access shall be provided no persons other than the Director, the Siting and Regulation Administrator, and the nuclear engineers.

6. The Director, EFSC members, Siting and Regulation Administrator, and nuclear engineers shall make no copies of materials conveyed to the ODOE under this agreement and shall discuss the information conveyed to the ODOE under this agreement with no persons other than themselves, the appropriate representatives of the companies which supplied the information to the NRC, and the appropriate representatives of the NRC.

7. ODOE will maintain an inventory of all documents received under this agreement. The inventory and documents will be available for NRC review upon request.

8. ODOE agrees to review annually its inventory of conveyed information and return those items no longer needed.

##### C. Classified Information

In the event ODOE requires access to classified information (e.g., restricted data or national security information), ODOE will work with NRC to obtain the necessary authorization and to provide the necessary facilities to review and store such information in accordance with all Federal rules and regulations.

##### D. Authority

Nothing in this sub-agreement is intended to restrict or extend the constitutional or statutory authority of either NRC or the State.

##### E. Contacts

The principal NRC contact under this sub-agreement shall be the Chief, Safeguards Branch, Region V. The principal State contact shall be the Administrator, Siting and Regulation of the Oregon Department of Energy.

##### F. Effective Date

This sub-agreement shall take effect immediately upon signing by the Director of the Oregon Department of Energy and the Executive Director for Operations of the Nuclear Regulatory Commission, and may be terminated upon 30 days written notice by either party.

\* For the purpose of this Memorandum of Understanding, the term nuclear facilities is defined to include the following plants or facilities within Oregon to the extent that these facilities are not covered by the NRC-State agreement referenced in paragraph 4:

- a. Nuclear power, research, and test facilities, and associated facilities;
- b. Nuclear fuel reprocessing facilities;
- c. Uranium isotope enrichment facilities;
- d. Nuclear fuel fabrication plants;
- e. Nuclear waste treatment, storage, and disposal plants;
- f. Uranium milling plants and mill tailings; and
- g. Uranium hexafluoride conversion plants.



## MEMORANDA OF UNDERSTANDING

For the Oregon Department of Energy,  
Lynn Frank,  
Director.

Dated at Salem, Oregon, this 19th day of  
January 1980.

For the United States Nuclear Regulatory  
Commission.

Lee V. Gossick,  
Executive Director for Operations.

Dated at Bethesda, Maryland this 4th day  
of January, 1980.

### **Sub-Agreement 2 Between the Oregon Department of Energy and the Nuclear Regulatory Commission Resident Inspectors**

#### **A. Scope**

This sub-agreement covers the relationship between the United States Nuclear Regulatory Commission (NRC) and the Oregon Department of Energy concerning their respective resident inspector programs at the Trojan Nuclear Facility (Trojan) located 30 miles northwest of Portland, Oregon, and operated by Portland General Electric Company (PGE).

During its 1979 Session, the Oregon Legislative Assembly enacted and the Governor signed Senate Bill 641 which requires the Oregon Department of Energy (ODOE) to maintain an inspector at the site of a nuclear-fueled thermal power plant. Under the resident inspector program established by the Nuclear Regulatory Commission, the NRC's Office of Inspection and Enforcement has stationed its own resident inspector at Trojan. This agreement will specify the relationship between the two programs.

#### **B. Training**

NRC will use its best efforts to make available space in its inspector training courses to accommodate any inspector or alternates hired by ODOE to be stationed at Trojan.

#### **C. Inspection Manuals**

NRC will make inspection manuals available to ODOE.

#### **D. Authority**

The parties agree that the ODOE inspector will not have authority to direct PGE employees to take any action. Under Oregon law, this is within the exclusive State jurisdiction of the Director of the Oregon Department of Energy or in his absence, the Governor. The inspector will make his recommendations to the Director through the Administrator, Siting and Regulation.

The Director of the Oregon Department of Energy or in his absence, the Governor shall not require the operators of Trojan to take action contrary to NRC requirements. If ODOE finds it necessary to direct the operators of Trojan to take action, ODOE shall obtain NRC's prior agreement that such

action does not have an adverse effect on plant or public safety.

Nothing in this sub-agreement is intended to restrict or extend the constitutional or statutory authority of either NRC or the State.

#### **E. ODOE Inspector's Duties**

The ODOE inspector's duties include the following:

1. Observing reactor plant maintenance, engineering, quality assurance, security, emergency planning and operation to evaluate compliance with Federal and State safety standards. Specific aspects to be observed include the control of reactivity, radiological protection and control, water chemistry control, system repair and preventive maintenance, in-service inspections and periodic testing, and compliance with plant security programs.

2. Advising the State of Oregon about this significance of any incident at the plant, and whether the corrective action taken is prompt and complete, by reviewing engineering system design, sequence of events, and trouble-shooting. This will include discussion of the incident with the plant management and off-site engineering managers.

3. Reviewing changes in plant operating and maintenance procedures and system modifications for conformance with State and Federal requirements, compatibility with system design, and effect on safe plant operations.

4. Researching plant conditions or practices to support ODOE engineering evaluation of the safe operation of the plant, including identification of as-built conditions, determination of historical performance of equipment, and review of operating practices.

#### **F. Working Relationships**

1. The ODOE inspector will not attempt to duplicate the regulatory activities of the NRC, but will rather attempt to supplement the NRC regulatory activities. To the extent possible, the ODOE and NRC inspectors will arrange their schedules and inspection activities so that their on-site activities complement each other, in order to provide the widest possible coverage of the plant and its operations.

2. The ODOE inspector will cooperate with the assigned NRC resident inspectors. The NRC inspector will reciprocate.

3. To the extent possible, the ODOE inspector may observe NRC audits, reviews, inspections, investigations, drills and meetings at Trojan. In the same way, the NRC resident inspector may observe ODOE audits, reviews, inspections, investigations, drills and meetings at Trojan. The parties recognize that there will be occasions

when, because of the sensitive nature of certain meetings, it may be necessary for the parties to conduct interviews privately and separately.

4. The ODOE is invited to all NRC exit interviews. In the same way, to the extent possible the NRC inspector may attend ODOE exit interviews. PGE will advise the ODOE and NRC inspectors of the time, date and location of all exit interviews.

#### **G. Contacts**

The principal NRC contact under this sub-agreement shall be the Director of NRC's Region V office. The principal State contact shall be the Administrator of Siting and Regulation, Oregon Department of Energy.

#### **H. Effective Date**

This sub-agreement shall take effect immediately upon signing by the Director of the Oregon Department of Energy and the Director of the Office of Inspection and Enforcement of the Nuclear Regulatory Commission, and may be terminated upon 30 days written notice by either party.

For the Oregon Department of Energy,  
Lynn Frank,  
Director.

Dated at Salem, Oregon this — day of  
January 1980.

For the United States Nuclear Regulatory  
Commission,  
Victor Stello,  
Director, Office of Inspection and  
Enforcement.

Dated at Bethesda, Maryland this 4th day  
of January, 1980.

➤ 45 FR 72980  
Published 11/3/80

### **ENVIRONMENTAL PROTECTION AGENCY**

### **NUCLEAR REGULATORY COMMISSION**

(RH-FRL-1653-3)

### **Regulation of Radionuclide Emissions; Memorandum of Understanding**

**AGENCIES:** Environmental Protection  
Agency, Nuclear Regulatory  
Commission.

**ACTION:** Notice of a Memorandum of  
Understanding.

**SUMMARY:** The Environmental Protection  
Agency (EPA) and the Nuclear  
Regulatory Commission (NRC) have  
entered into a Memorandum of

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Understanding as required by section 122(c)(2) of the Clean Air Act, as amended in 1977, with respect to the regulation of radionuclide emissions into air from sources and facilities licensed by NRC. This Memorandum defines in general terms the respective roles of the two agencies and establishes a framework of cooperation for avoiding unnecessary duplication of effort and for conserving resources in establishing, implementing, and enforcing standards for airborne radionuclide emissions from sources and facilities licensed by NRC. This Memorandum may be revised in the future as EPA develops Clean Air Act radionuclide standards applicable to NRC licensees.

**ADDRESSES:** Docket No. A-79-11, containing material relevant to this action, is located in the U.S. Environmental Protection Agency, Central Docket Section, Waterside Mall, West Tower Lobby, Gallery One, 401 M Street, SW, Washington, DC. The Docket may be inspected between 8 a.m. and 4 p.m. on weekdays, and a reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** Paul J. Magno, Office of Radiation Programs (ANR-460), U.S. Environmental Protection Agency, Washington, DC 20460, telephone (703) 557-7380, or John W. N. Hickey, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 443-5966.

**SUPPLEMENTARY INFORMATION:** Under various statutes both EPA and NRC have the authority to regulate radioactive emissions of source material, byproduct material, and special nuclear material into the air. Under the Atomic Energy Act of 1954 and Title II of the Energy Reorganization Act of 1974, NRC is authorized to license and regulate the manufacture, production, receipt, acquisition, possession, ownership, use, and transfer of source material, byproduct material, and special nuclear material.<sup>1</sup> Under the Clean Air Act, as amended in 1977, EPA was also given the authority to regulate air emissions of source material, byproduct material, and special nuclear material.<sup>2</sup>

Section 122(a) of the Clean Air Act, as amended in 1977, directed the

Administrator of EPA to determine whether emissions of radioactive pollutants (including source material, byproduct material, and special nuclear material) into ambient air will cause or contribute to air pollution which may reasonably be anticipated to endanger public health. If the Administrator made an affirmative finding, he was required to list radioactive pollutants as substances to be regulated under the Clean Air Act.

On December 27, 1979, the Administrator of EPA made an affirmative finding and listed "radionuclides" as hazardous air pollutants under Section 112 of the Clean Air Act (44 FR 76738, December 27, 1979). The term "hazardous air pollutant," as defined by Section 112, means an air pollutant to which no ambient air quality standard is applicable and which causes or contributes to air pollution which may reasonably be anticipated to result in an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness. After listing radionuclides as hazardous air pollutants under Section 112 of the Clean Air Act, the Administrator must promulgate regulations establishing standards for these pollutants, and where applicable, all sources and facilities emitting these pollutants, including NRC-licensed sources and facilities, must comply with these standards.

NRC-licensed sources and facilities include nuclear power plant operations and other activities in the nuclear fuel cycle, research and development laboratories, universities, research and test reactors, hospitals, radiopharmaceutical facilities, industrial users and various miscellaneous users of source material, byproduct material, and special nuclear material. Radionuclide air emissions from these licensed sources and facilities are already limited or controlled by a number of existing regulations and standards, including:

1. 10 CFR Part 20, "Standards for Protection Against Radiation," which among other things specifies limits for radionuclide releases into air from all NRC licensees and includes the provision that these releases should be "as low as reasonably achievable" (ALARA);

2. Appendix I of 10 CFR Part 50,

<sup>1</sup> This standard was issued by EPA under the Atomic Energy Act authority to establish generally applicable environmental radiation standards. Uranium fuel cycle facilities subject to 40 CFR 190 and regulated by NRC, include uranium mills, uranium conversion plants, uranium fuel fabrication plants, light-water-cooled nuclear power plants using uranium fuel, and spent uranium fuel reprocessing plants, as defined in 40 CFR 190 (42 F.R. 2858, January 13, 1977).

"Domestic Licensing of Production and Utilization Facilities," which specifies numerical design objectives to insure that radionuclide releases from light water nuclear power reactors are kept "as low as reasonably achievable" (this regulation is implemented by NRC through technical specifications on individual licensees which specify release limits); and

3. 40 CFR Part 190, "Environmental Radiation Protection Standards for Nuclear Power Operations," which establishes generally applicable standards for radionuclide emissions from uranium fuel cycle facilities.<sup>3</sup>

Recognizing the overlapping jurisdictional authorities resulting from the Clean Air Act Amendments of 1977, Congress, under Section 122(c)(2) of the Clean Air Act, as amended in 1977, directed EPA and NRC, no later than six months after EPA lists any source material, byproduct material, or special nuclear material as a substance to be regulated under the Act, to enter into an interagency agreement with respect to those sources or facilities which are under NRC's jurisdiction. The Act states that this agreement shall minimize duplication of effort and conserve resources in establishing, implementing, and enforcing Clean Air Act radionuclide standards for sources or facilities licensed by NRC.

EPA and NRC have entered into such an agreement. Under this agreement EPA shall promulgate standards for airborne radionuclide emissions under its Clean Air Act authority and NRC shall have the primary role in implementing and enforcing these standards where applicable for sources and facilities licensed by NRC. EPA shall inform NRC of proposed actions for the development of Clean Air Act radionuclide standards for sources and facilities licensed by NRC and shall consult regularly with NRC during the standards development process. NRC shall assist EPA in standards development by: (a) providing information and recommendations, (b) participating in studies, and (c) reviewing and commenting on proposed standards.

As EPA standards are developed for NRC-licensed sources and facilities, EPA and NRC will work together in developing mutually acceptable procedures for implementing and enforcing these standards. These efforts are expected to lead to a revision of this agreement defining the specific roles of each agency in implementing and enforcing these standards. This revision should be completed before EPA proposes its first standards applicable to NRC-licensed sources and facilities.

The text of the Memorandum of Understanding is set forth below.

<sup>1</sup> Source material, byproduct material, and special nuclear material are radioactive materials as defined in the Atomic Energy Act of 1954 as amended.

<sup>2</sup> Under the Atomic Energy Act of 1954 and Reorganization Plan No. 3 of 1970, EPA also is authorized to establish generally applicable environmental standards for protection of the general environment from radioactive materials. These standards, which apply outside the boundaries of NRC-licensed facilities, are implemented by NRC through its licensing authority.

## MEMORANDA OF UNDERSTANDING

### Memorandum of Understanding Between EPA and NRC Concerning the Clean Air Act, as Amended in 1977

In accordance with Section 122(c)(2) of the Clean Air Act, as amended in 1977, to minimize duplication of effort and conserve resources in the regulation of radionuclide emissions to air from sources or facilities licensed by NRC, EPA and NRC agree to the following:

#### *I. Establishment of Standards*

1. EPA shall promulgate standards for airborne radionuclide emissions under its Clean Air Act authority.

2. EPA shall inform NRC of proposed actions for the development of Clean Air Act radionuclide standards for sources and facilities licensed by NRC and shall consult regularly with NRC during standards development.

3. NRC shall assist EPA in standards development by:

- a. Providing EPA with available data and information on NRC-licensed sources and facilities as needed, including information on radionuclide air emissions, the environmental impact of these emissions, and control technology for reducing these emissions;
- b. Participating with EPA in carrying out any necessary special studies at NRC-licensed sources and facilities; and
- c. Providing recommendations and reviewing and commenting on EPA's proposed standards.

#### *II. Implementation and Enforcement of Standards*

1. NRC, using its own regulatory program and statutory and regulatory authorities, shall have the primary role in implementing and enforcing EPA's Clean Air Act radionuclide standards for sources and facilities licensed by NRC.

2. During the development of Clean Air Act radionuclide standards for NRC-licensed sources and facilities, EPA and NRC shall work together to establish mutually acceptable procedures for implementing and enforcing these standards. These procedures will be consistent with the provisions of the Clean Air Act and will allow both EPA and NRC to fulfill their statutory responsibilities with a minimum of duplication of effort. These procedures and the specific roles of each agency in carrying out these procedures will be defined in a revision to this agreement which should be completed before EPA proposes its first standards applicable to sources and facilities licensed by NRC.

#### *III. Effective Date, Revision, and Termination*

This Memorandum shall be effective immediately, and shall continue in effect

until revised by mutual agreement, unless terminated by either party upon 120 days notice in writing.

Dated: October 17, 1980.

**David G. Hawkins,**

*Assistant Administrator for Air, Noise, and Radiation, U.S. Environmental Protection Agency.*

Dated: October 24, 1980.

**William J. Dircks,**

*Executive Director for Operations, U.S. Nuclear Regulatory Commission.*

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grant relief from safeguards reporting requirements for small quantities of byproduct material and grant relief from both safeguards and criticality safety controls for small quantities of fissile material.

Two persons commented on the costs of NRC licensing and inspection fees and the beneficiaries of NRC services. Fees associated with fissile material licensing and inspection activities (and all other fee categories) are based on the sum on the average of the direct and indirect costs that the NRC incurs in furnishing the services for a member of the class of identifiable recipients for which the fees are assessed. Excluded from consideration for recovery are budgeted regulatory costs that are part of a program conducted on behalf of the public.

One person expressed the opinion that the inclusion of 10 CFR Part 34, "Licenses for Radiography and Radiation Safety Requirements for Radiographic Operations," within the scope of 10 CFR Part 21, "Reporting of Defects and Noncompliance," is not necessary. The NRC's regulations in 10 CFR Part 21 implement section 206 of the Energy Reorganization Act of 1974, as amended. Part 21 requires, among other things, that information reasonably indicating that a licensed activity or basic component supplied to such activity fails to comply with the Atomic Energy Act of 1954, as amended, or any applicable rule, regulation, order, or license of the NRC relating to substantial safety hazards, or contains a defect which could create a substantial safety hazard should be reported. Incident and overexposure reporting requirements had been in existence in Commission regulations for a number of years before enactment of the Energy Reorganization Act of 1974 (which contains section 206) in October 1974.

That person also expressed the opinion that the inclusion of industrial radiography licensees in 10 CFR 71.12, "General License for Shipment in DOT Specification Containers, in Packages Approved for Use by Another Person, and in Packages Approved by a Foreign National Competent Authority," is not necessary. It is the general licensees delivering licensed radioactive material to a carrier for transport under the authority of 10 CFR 71.12(b) who must assure themselves and the NRC that the subject packages are as described in the packages approvals and that they are used, tested, and maintained in accordance with both the general and specific portions of an approved quality assurance program. (The NRC must exercise its regulatory authority through its general licensees who use package approvals because the NRC has no

general enforcement powers over package manufacturers or package owners unless they possess and use licensed radioactive material. They would, however, be subject to 10 CFR Part 21, "Reporting of Defects and Noncompliance.")

A copy of "Abstracts of Comments and Staff Responses: Proposal that Nuclear Regulatory Commission Be Divided into Two Separate Entities—Docket No. PRM 30-58," is available for public inspection at the Commission's Public Document Room at 1717 H Street NW., Washington, D.C. Single copies of the comment analysis may be obtained on request from the Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

### Assigned Functions

The Energy Reorganization Act of 1974, as amended, was enacted by the Congress and approved as Public Law 93-438 on October 11, 1974.

Title II of that Act established the Nuclear Regulatory Commission and transferred to the Nuclear Regulatory Commission all the licensing and related regulatory functions of the Atomic Energy Commission.

In assigning those functions within the Nuclear Regulatory Commission, the Congress not only distinguished between nuclear reactors and other licensed facilities and nuclear materials, but also gave due and proper emphasis to functions which are vital to the public health and safety and the safe and efficient operation of both nuclear reactors and other licensed activities.

Sec. 203(b) of that Act provides that the Director of Nuclear Reactor Regulation shall perform such functions as the Commission shall delegate including principal licensing and regulation involving all facilities and materials licensed under the Atomic Energy Act of 1954, as amended, associated with the construction and operation of nuclear reactors licensed under the Atomic Energy Act of 1954, as amended.

Sec. 204(b) of the Energy Reorganization Act of 1974, as amended, provides that the Director of Nuclear Material Safety and Safeguards shall perform such functions as the Commission shall delegate including principal licensing and regulation involving facilities and materials licensed under the Atomic Energy Act of 1954, as amended, associated with the processing, transport, and handling of nuclear materials, including the provision and maintenance of safeguards against threats, theft, and sabotage of such licensed facilities and materials. The Nuclear Regulatory Commission has used the flexibility provided by Sec. 204(b) of the Energy

Reorganization Act of 1974, as amended, to establish within the Office of Nuclear Material Safety and Safeguards the Division of Fuel Cycle and Material Safety to perform those licensing and regulatory activities which pertain to the processing, transport, and handling of nuclear materials off the nuclear reactor site.

The Energy Reorganization Act of 1974, as amended, provides no authority under which the Nuclear Regulatory Commission, on its own initiative, may transfer any licensing or related regulatory function to a new or established agency of the Federal Government.

### Alternative Organization Forms

Alternative organization forms for nuclear regulation have been considered in recent studies conducted on or for the Nuclear Regulatory Commission.

Sec. 306 of the Energy Reorganization Act of 1974, as amended, required the Comptroller General of the United States to audit, review, and evaluate the implementation of the provisions of Title II of that Act by the Nuclear Regulatory Commission not later than sixty months after the effective date of that Act and submit to the Congress a report on his audit.

In the Comptroller General's report to Congress, "The Nuclear Regulatory Commission: More Aggressive Leadership Needed," EMD-80-17, dated January 15, 1980, the General Accounting Office (GAO) identified an alternative (separating NRC into separate policymaking and regulatory agencies) similar to the petitioner's proposal.

GAO noted that separation of NRC into two agencies could build on the strengths of both the commission and the single administrator forms of nuclear regulation. Policymaking on critical unresolved nuclear regulation issues could continue under the commission form with the advantage of multimember deliberations. At the same time, day-to-day regulation of nuclear activities could proceed under an agency headed by a single administrator with prospects for better management of these day-to-day activities.

GAO discussed this alternative with a cross-section of people knowledgeable of nuclear regulation, including representatives of Government, the nuclear industry, public interest groups, and academia. Opinion on the alternative ranged from active interest to a belief that it represents an unnecessary proliferation of Federal regulatory agencies.

GAO chose not to recommend any alternative to strengthening the present commission because none of the alternative forms appeared to have a



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clear-cut advantage. In conclusion, GAO stated:

Ultimately, the Congress must consider the advantages and disadvantages of various organizational forms and decide on the organizational structure which, on balance, best represents what the Congress wants for nuclear regulation.

### Grounds for Denial

The Commission has given careful consideration to petition for rule making PRM 30-56 and the public comments received thereon and has decided to deny the petition on the grounds that, given the structure of the Energy Reorganization Act of 1974, as amended, it is clear that Congress intended the newly created Nuclear Regulatory Commission to have licensing and related regulatory authority not only over nuclear reactors, uranium milling, nuclear fuel processing and reprocessing, and other areas dealing with fissile materials but also have this same authority over byproduct materials. The NRC itself cannot "... separate the United States Nuclear Regulatory Commission into two separate entities..." Such a separation could only be accomplished in either of two ways: (1) enactment of legislation by the U.S. Congress, the method by which the existing NRC was created; or (2) through implementation of an Executive Reorganization Plan pursuant to 5 U.S.C. 901 *et seq.*

A copy of the petition for rule making and copies of the letters of comment and the Commission's letter of denial are available for public inspection at the Commission's Public Document Room at 1717 H Street NW., Washington, D.C.

45 FR 67673

Published 10/14/80

### 10 CFR Part 30

[Docket No. PRM-30-57]

#### General Atomic Co.; Filing of Petition for Rulemaking

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Publication of Petition for Rulemaking from General Atomic Company.

**SUMMARY:** The Nuclear Regulatory Commission is publishing for public comment, as a petition for rulemaking, a motion filed before the Commission on September 9, 1980, by the General Atomic Company. This petition, which has been assigned Docket No. PRM-30-57, requests that the Commission amend its regulation, 10 CFR Part 30, to permit persons exempt from regulation to receive ionizing radiation measuring instruments which contain more than one source of byproduct material.

**DATE:** Comment period expires December 15, 1980.

**ADDRESSES:** A copy of the petition for rulemaking is available for public inspection in the Commission's Public Document Room, 1717 H Street, NW., Washington, DC. A copy of the petition may be obtained by writing to the Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

All persons who desire to submit written comments concerning the petition for rulemaking should send their comments to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch.

**FOR FURTHER INFORMATION CONTACT:** J. M. Felton, Director, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: 301-492-7211.

**SUPPLEMENTARY INFORMATION:** The petitioner states, in part, that "... it seem[s] evident that the particular language of the regulations (§ 30.15(a)(9)), read to limit licenses of instruments containing byproduct material to persons exempt from regulation to a single source per instrument, was in effect the result of a situation not envisioned at the time of drafting..." The petitioner further states that "These (the petitioner's) instruments are devices which perform several radiation monitoring functions... (and)... the instruments would have to be redesigned, each as a single function instrument with a single exempt quantity byproduct source. To do so would increase costs and delay delivery of instrumentation important to monitoring radiation and radioactive materials in and around major nuclear facilities. There is no compromise of public health and safety by permitting use of more than one source in a single multi-functional device."

The petitioner requests that 10 CFR 30.15(a)(9) be amended to read as follows:

### § 30.15 Certain items containing byproduct material.

(a) \* \* \* any person is exempt from the \* \* \* regulations in \* \* \* this chapter to the extent that such person receives, possesses, uses, transfers, owns, or acquires the following products:

(9) Ionizing radiation measuring instruments containing, for purposes of internal calibration or standardization, sources of byproduct material each not exceeding the applicable quantity set forth in § 30.71, Schedule B.

45 FR 73080  
Published 11/4/80  
Comment period expires 1/5/81

### 10 CFR Part 50

[Docket No. PRM-50-29]

#### Electric Utilities; Filing of Petition for Rulemaking

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Publication of petition for rulemaking from electric utilities.

**SUMMARY:** The Nuclear Regulatory Commission is publishing for public comment a petition for rulemaking filed before the Commission on September 16, 1980, by Electric Utilities. This petition, which has been assigned Docket No. PRM-50-29, requests that the Commission address the issue of Anticipated Transients Without Scram (ATWS). ATWS has been designated an Unresolved Safety Issue by the Commission. An Anticipated Transient Without Scram occurs at a nuclear power plant if an abnormal operating condition ("anticipated transient") that should cause the plant's reactor protection system to initiate a rapid shutdown ("scram") of the reactor fails to function.

**DATE:** Comment period expires January 5, 1981.

**ADDRESSES:** A copy of the petition for rulemaking is available for public inspection in the Commission's Public Document room, 1717 H Street, N.W., Washington, D.C. A copy of the petition may be obtained by writing to the Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.



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All persons who desire to submit written comments concerning the petition for rulemaking should send their comments to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch.

**FOR FURTHER INFORMATION CONTACT:** J. M. Felton, Director, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Telephone: 301-492-7211.

### SUPPLEMENTARY INFORMATION:

Petitioner Electric Utilities (a group of companies which have over sixty nuclear power reactors currently in operation, under construction, or planned) requests that the Commission initiate rulemaking on the Anticipated Transient Without Scram (ATWS) issue through one of two approaches outlined in the petition.

Petitioner first requests that the Commission use a notice-and-comment rulemaking proceeding based on the publication of a proposed rule which the petitioner sets out in a proposed new § 50.47 to 10 CFR Part 50. Petitioner's proposed new § 50.47 reads as follows:

#### § 50.47 Standards for Reduction of Risk from Anticipated Transients Without Scram (ATWS)

Each boiling or pressurized light-water nuclear power reactor for which a construction permit application was filed as of the effective date of the rule shall, as provided in paragraphs (a) through (c) of this section, reduce the risk from Anticipated Transients Without Scram (ATWS). The modifications required by this rule must be completed as expeditiously as is feasible, taking into account the time needed for design development and approval, equipment availability and the regional demand for power.

a. For boiling water reactors manufactured by the General Electric Company, provide (1) a means to trip the recirculation pumps upon receipt of a signal indicative of an ATWS event; (2) an independent, redundant and diverse electrical means to initiate a reactor scram upon receipt of a signal indicative of an ATWS event; and (3) a scram discharge volume system designed and installed such that it will have sufficient capacity to receive water exhausted by a full reactor scram.

b. For pressurized water reactors manufactured by Combustion Engineering, Inc. and the Babcock & Wilcox Company, provide (1) an alternate means to shut down the reactor that is diverse from and redundant to the electrical portion of the reactor protection system up to but not including the trip breakers, and (2) an automatic initiation of auxiliary feedwater independent of the reactor protection system.

c. For pressurized water reactors manufactured by the Westinghouse Electric Corporation, provide automatic initiation of

turbine trip and auxiliary feedwater independent of the reactor protection system.

The petitioner states that "These proposed modifications are straightforward and well understood by the industry and the NRC Staff. Thus, they will not require great expenditures of resources for technical analysis, and they can be adopted in short order by a notice-and-comment rulemaking. Because a substantial portion of the industry is already willing to make these modifications if they will resolve the ATWS issue for existing plants, there is unlikely to be much regulatory effort required to imposed them. Most important of all, the proposed modifications clearly decrease the risk of ATWS without simultaneously increasing other, competing risks."

The petitioner states that, in regard to the development of a regulatory program to resolve the ATWS issue for new plants, "The [Electric] Utilities do not believe that an ATWS rule for new plants should be developed until the results of the degraded core rulemaking are known. Because the same issues and facts are crucial to each, ATWS is simply a subpart of the degraded core matter. . . . Accordingly, there seems to be no sound reason for seeking ATWS solutions for new plants in isolation from other degraded core events."

Petitioner also states that "The second prerequisite for an ATWS rule for new plants is the definition, either by policy statement or rulemaking, of a safety goal for nuclear power plant regulation. . . . ATWS involves the reduction of risks that are already small. Since it is impossible to reduce risks to zero, the philosophical question always remains 'how safe is safe enough?' Although, of necessity, the lack of a safety goal has not precluded rulemaking in the past, it would be unwise to ignore safety goal guidance that should soon be available. Recent recognition that such guidance is essential suggests that it will be available in time to guide a new-plant ATWS rule."

Petitioner further states that "A third and final prerequisite for a new-plant [ATWS] rule is further work on probabilistic analysis. The extent to which safety analyses should rely on this technique, and the methodology to be used when it is applied, must be more clearly defined. . . . Efforts to these ends are already planned. . . ."

Finally, in regard to its recommended ATWS rulemaking approach noted above, petitioner states that "The [Electric] Utilities recognize that, after the degraded core, safety goal and probabilistic analysis efforts have been

completed, the Commission may see a need to augment the ATWS rule proposed for existing plants. . . . We do not believe that this will prove to be the case. But if the Commission lacks our confidence, it may prefer to adopt the Utilities' proposed rule as an "interim" measure, to be finalized in the wake of these efforts, quite possibly at the same time that ATWS requirements are set for new plants."

The petitioner requests that if the Commission decides not to proceed with the rulemaking approach outlined above, an ATWS rulemaking proceeding with formal evidentiary hearings be conducted using certain adjudicatory procedures the petitioner feels are required. The petitioner's recommended adjudicatory procedures are as follows:

1. A hearing board to be appointed from the ASLB and ASLAB panels, composed of technically qualified experts who can bring a fresh approach to the evidence.
2. All relevant documents available to the NRC Staff, including internal memoranda and working papers, to be placed in a technical data bank and made available in one or more public document rooms.
3. A statement of issues to be prepared by the hearing board after statements of contentions are filed by parties and one or more prehearing conferences are held.
4. Written statements of position to be filed by all parties.
5. Written cross-statements to be filed by any party who wishes to respond to other parties.
6. A public hearing to be held, with all parties having an opportunity to present sworn witnesses and documentary evidence in support of their statements and cross-statements.
7. Questioning of witnesses to be conducted by the hearing board, with the parties allowed to submit suggested questions for the board to ask; cross-examination to be conducted by the parties if they specify the issues on which they wish to cross-examine and satisfy the board that cross-examination is needed to explore these issues adequately.
8. A proposed rule to be recommended by the hearing board to the Commission, along with a supporting discussion that explains the evidentiary basis for the rule.
9. Oral argument by the parties before the Commission.

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➤ 45 FR 74492  
Published 11/10/80

### 10 CFR Part 51

[Docket No. PRM-51-5]

#### States of New York, Ohio, and Wisconsin; Notice of Denial of Petition for Rulemaking

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Denial of petition for rulemaking.

**SUMMARY:** By a two-two vote, the Nuclear Regulatory Commission (NRC) had deadlocked over whether to grant a motion filed by the States of New York, Ohio, and Wisconsin in Docket No. RM-50-3, on December 15, 1978, which has been treated as a petition for rulemaking and assigned Docket No. PRM-51-5. A notice of receipt of the petition and request for comments was published in the *Federal Register* on November 14, 1979. The petitioners requested that the Table of Uranium Fuel Cycle Environmental Data be amended to account for the commitment of economic resources necessitated by the various nuclear waste management activities involved in the uranium fuel cycle. The effect of the Commission's tie vote is that the petition is denied.

**ADDRESS:** Copies of the petition for rulemaking and the NRC's letter of denial are available for public inspection and copying at the Commission's Public Document Room, 1717 H Street, NW., Washington, D.C.

**FOR FURTHER INFORMATION CONTACT:** T. R. Workinger, Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Telephone: 301-427-4211.

**SUPPLEMENTARY INFORMATION:** The petitioners proposed that the Nuclear Regulatory Commission amend Table S-3 of 10 CFR 51.20(e) to include dollar value impacts to account for the commitment of economic resources necessitated by the various nuclear waste activities involved in the uranium fuel cycle. Specifically, the petitioners proposed that Table S-3 include the commitment of economic resources (cost/RRY\*) for low-level waste disposal, fuel pool storage, transportation, spent fuel containers, geological repository, and dismantling of the nuclear reactor at the end of its useful life, and proposed a range of values for each of these cost categories. By a two-two vote, the Commission has

deadlocked over whether to grant this petition. The petition is therefore not granted by the Commission. This supplementary information reviews the background of the petitioners' request. Separate views of the Commissioners are appended.

#### Basis for Request

The States made several statements to justify consideration of their proposal. Their main points are summarized below:

1. Exclusion of economic values from Table S-3 "would not only be contrary to the Commission's statements regarding this reopened proceeding but contrary to the law governing the rulemaking.

2. The Commission's regulations "acknowledge the need to consider the impacts of reactor operation prior to reactor licensing . . . To exclude adverse data would, of course, fatally prejudice the cost-benefit analysis."

3. The Commission's regulation, 10 CFR 51.20(e) (1977), states that "the impacts of the entire uranium fuel cycle are to be quantified in Table S-3 and that no further discussion of those impacts is required beyond Table S-3." Relying on the 1977 rule, the petitioners state that " . . . inclusion in Table S-3 of economic data relating to the backend of the fuel cycle is mandated . . ." by this regulation. The petitioners point out that Table S-3 quantifies various environmental effects, but "does not state how many dollars will be used or irretrievably committed as a result of reactor operation and the fuel cycle activities, such as waste management, which are crucial to the protection of man and his environment." They claim that "the costs which have been omitted (from Table S-3) are unavoidable, direct and quantifiable . . ." They also claim that the costs of reactor decontamination, decommissioning, and waste disposal are substantial and that exclusion of these costs renders individual cost-benefit analyses for reactor licensing proposals "hopelessly invalid."

4. "The true costs associated with the waste management and fuel reprocessing portions of the uranium fuel cycle involve the irretrievable commitment of economic resources. Thus the assessment and inclusion of these costs in Table S-3 are fundamental to compliance with the National Environmental Policy Act, section 102(2)(D) and essential to an accurate balancing of costs and benefits by the Commission as mandated by 10 CFR 51.20(b)." The Council on Environmental Quality's guidelines specify that secondary or indirect

consequences should be included in analyses for environmental impact statements. According to the guidelines, these effects "may often be even more substantial than the primary effects of the original action itself" (40 CFR 1500.8(a)(3)(ii)) (1977). Thus, "(t)here could be no more appropriate application of this section of the CEQ guidelines than to the economic impacts of waste management activities."

#### Present Status of S-3 Rule

On August 2, 1979, after an extensive proceeding focused on the nuclear waste management and fuel reprocessing parts of the fuel cycle, the Commission promulgated a final rule, 44 FR 45362-45374, which sets out revised impact values in Table S-3. The impact values in this table differ only slightly from the values in the interim rule. The final rule also specifies fuel-cycle-related subjects that are to be considered in individual licensing proceedings as part of the environmental cost-benefit analysis for a power reactor.

#### Request for Comments on Petition

A notice of filing of petition for rulemaking was published in the *Federal Register* on November 14, 1979 (44 FR 65598). The comment period expired January 14, 1980. Seven letters of comment were received in response to this notice. One of the letters supported the petition and six letters opposed the petition.

The letter in support of the petition noted, in general, that costs are escalating significantly.

Four of the letters opposing the petition commented on the proposed costs for decommissioning a nuclear power reactor at the end of its useful life. Two letters addressed the issue of whether reactor decommissioning costs should be considered in the fuel cycle rule, since the S-3 fuel cycle rule was designed to assess the environmental impact of the steps in the fuel cycle external to the reactor site.

Three letters commented that nuclear waste management costs are case-specific, vary with time, and should not be included in the S-3 fuel cycle rule. One letter commented that the rule is of little practical value unless its elements are both (1) generally applicable (generic), as distinguished from being tied to the individual circumstances of a particular reactor (case-specific), and (2) reasonably stable and predictable over time. Cost values probably would not remain up to date very long, and thus the necessity to continually update cost values in the rule would defeat the very purpose of establishing it—to avoid constant relitigation of the issues.

\*Reference Reactor Year (RRY)

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A copy of "Abstracts of Comments and Staff Responses: Proposal that Nuclear Regulatory Commission Amend Table S-3 of 10 CFR 51.20(e) to Include the Economic Impacts of Various Waste Management Activities of the Uranium Fuel Cycle—Docket No. PRM 51-5," will be placed in the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C., for public inspection and copying for a fee.

The effect of the Commission's action on this petition is that it is denied.

Dated at Washington, D.C., this 3rd day of November, 1980.

For the U.S. Nuclear Regulatory Commission.

**Samuel J. Chilk**

*Secretary of the Commission.*

### **Separate Views of Chairman Ahearn and Commissioner Hendrie**

Chairman Ahearn and Commissioner Hendrie, who voted to deny the petition, based their decision on the following analyses:

The decision whether to resolve issues by rulemaking or in individual licensing proceedings, and determination of the scope of a given rulemaking proceeding, is a matter of Commission discretion. By itself, Table S-3 does not and is not intended to implement all the requirements of NEPA. Its purpose is to fix generically, by rulemaking proceedings, certain environmental effects attributable to the variety of uranium fuel cycle activities in support of a model 1,000 MWe nuclear reactor, which are beyond the control of the license applicant, so that it is not necessary for each applicant, other interested persons, and the NRC staff to redefine and litigate these values in every individual reactor licensing proceeding. Cost data are somewhat regional or site-specific and vary with time; and the applicant has some control over costs by choice of alternatives, e.g., method for waste treatment or method of decommissioning. Moreover, generic dollar values would be subject to challenge because they may not remain valid for very long, and if included in Table S-3, they would have to be frequently updated by rulemaking proceedings to amend Table S-3. The necessity to frequently update economic values in the S-3 fuel cycle rule would defeat its purpose—to avoid constant relitigation. For these reasons, the economic commitments related to the various nuclear waste activities involved in the uranium fuel cycle should continue to be addressed on a case-by-case basis and discussed in a manner similar to the way all other economic commitments are addressed in

the applicable sections of environmental reports and environmental impact statements. Since the applicant and the staff both have access to current cost data and estimated costs, the evaluation of the economic costs of power generation and related cost-benefit analyses in environmental reports and impact statements should be based on current regional or site-specific cost projections, rather than generic values.

### **Grounds for Denial**

Petition for rulemaking PRM 51-5 should be denied on the grounds that economic costs related to nuclear waste management activities are too variable to be treated generically and are more appropriately addressed on a case-by-case basis in the same manner as other economic cost data relevant to the evaluation of the cost of generating power. Not only does the choice among alternative nuclear waste management activities affect the amount of economic resources committed, but the alternative selected is specific to each reactor and is within the license applicant's control. Since generic cost data are unlikely to remain valid for more than a short period of time, and since appropriate facility-specific data are readily available for use by the applicant, intervenors and the NRC staff, there is little merit in supplying generically derived cost data in Table S-3 for use in the benefit-cost analysis of individual nuclear reactors.

### **Separate View of Commissioner Gilinsky**

I would grant the motions to amend Table S-3 to include the costs in dollars of the various waste management activities connected with power reactor operation. The Table cannot be used for its intended purpose—the balancing of costs and benefits of reactor operation—without such figures. The staff position that the costs related to waste are so variable that they cannot be treated generically is to my mind indefensible.

I should add that I continue to believe, as I wrote in my separate views on the final adoption of the S-3 rule (44 FR 45374), that it is virtually inconceivable that the Table would affect the outcome of any licensing proceeding before our Boards, precisely because of the generic nature of the information it contains. Because the Table does not distinguish among reactors, a decision in one case that the fuel cycle costs outweigh the reactor's benefits is in effect a decision that no reactor should be licensed. As a practical matter, such a finding can only come from the Commission itself. What is wanted for the Boards is therefore not

a table of values but a generic finding by the Commission.

Nevertheless, since the Commission has chosen to have the Boards work with the Table, we should try to make it usable.

While it is true that cost data will vary slightly from region to region and reactor to reactor, bounding assumptions can be made and values can be attached to particular alternatives. Cost figures would not need to be updated more than every five years, and this would be a much easier matter than litigating them in individual proceedings.

Commissioner Bradford agrees with the general thrust of these comments.





## PART 2 • STATEMENTS OF CONSIDERATION

3. Representation at NRC proceedings: One commenter suggests that "the restriction of attorney-at-law to only those admitted to the bar of U.S. or District of Columbia Courts or the highest court of any State, territory, or possession of the United States may well work to deprive public-interest intervenors of otherwise well-qualified counsel or other legal representation." The Commission believes the restriction is appropriate because admission before one of the specified courts is generally required before an attorney may be licensed to engage in the practice of law in a particular jurisdiction.

The Commission has determined that the words "or officer" should be added to the second sentence of § 2.713(b), following "duly authorized member." The clarification makes clear that a partnership, corporation or unincorporated association may be represented by a duly authorized officer, as well as by a member or attorney, and reflects both actual practice and the intent of the rule.

4. Process of appealing suspensions: The provisions for appealing suspensions received a number of comments. Two commenters express concern that the appeals process requires a suspended individual to overcome a presumption of guilt and establish his or her innocence. The Commission disagrees with the characterization. Although there is some presumption that the action of a lower administrative tribunal is correct, the Commission or an Atomic Safety and Licensing Appeal Board need not accede to a lower board's decision simply because it is supported by "substantial evidence" or is not "clearly erroneous." See *Duke Power Company* (Catawba Nuclear Station, Units 1 and 2), ALAB-355, 4 NRC 397 (1976).

Another commenter recommends that a proceeding be automatically stayed whenever a representative is suspended, even for one day or less. The commenter notes that disciplinary action normally focuses on the conduct of the representative rather than the party and recommends that the "necessary to prevent injustice" standard governing the granting of a stay in § 2.714(c)(2) be deleted. She recommends instead that the party be given the option of electing either an automatic stay pending completion of the suspension (or final disposition of the appeal, if appealed) or a stay for a reasonable period of time in which to secure other representation.

The Commission believes that the proposed rule adequately protects the interests of an affected party by permitting a stay for a reasonable period of time in order to obtain other

representation if necessary to prevent injustice. Whether a stay should be granted in a particular case should be left to the discretion of the presiding officer, since that individual will be most familiar with the procedural posture of the proceeding and the impact of the suspension upon the parties. Under the commenter's proposal, a lengthy suspension could translate into a day-for-day stay of the entire proceeding, even though alternative representation might be available much sooner. This could add unnecessary delay to licensing proceedings.

The commenter also suggests the establishment of an alternative appeals process in cases in which the Commission itself orders a suspension so that the Commission does not also function as the appellate body. Since the Commission acts as a collegial body in licensing proceedings, there will be no further administrative appeal of suspensions it orders. Judicial review would be available to a suspended representative. Therefore, the Commission believes an alternative appeals process is unnecessary.

One commenter suggests that the rule be amended to require the completion of an appellate hearing within 10 days of the imposition of the suspension or else the suspension should be revoked, not merely lifted. According to the commenter, this change is designed to prevent an automatic 10-day non-reviewable suspension. The Commission notes that it may not always be practical to complete a hearing within 10 days of the imposition of a suspension because the rule provides 10 days for filing an appeal. Since proposed § 2.713(c)(3) directs that a necessary hearing shall commence as soon as possible after the filing of an appeal, the Commission believes that the intent of the comment is met.

However, after its own further review, the Commission has decided to broaden and revise the process for appealing suspensions in three respects. First, an appeal of a reprimand, censure, or suspension not exceeding 1 day is authorized. The proposed rule limited review to suspensions exceeding 1 day. The Commission believes that a right to appeal any sanction imposed pursuant to this section is desirable because, at least in the case of an attorney, an administratively unappealable sanction may saddle an individual with an irrevocable, and possibly unjustified, professional "black mark." In the District of Columbia, for example, an applicant for admission to the bar must state whether he or she has been suspended, reprimanded or censured as an attorney.

Second, the Commission has revised the proposed rule to delay the effectiveness of suspensions exceeding 1 day for a period of 72 hours from the time of the suspension order to permit the suspended individual to request a stay of the sanction from the reviewing tribunal pending appeal. A timely stay request will stay the imposition of the sanction until the reviewing tribunal rules on the motion. Ten days are provided for the Commission or Appeal Board, as appropriate, to rule on the motion. All time limits will be computed in accordance with 10 CFR 2.710. Responses to the stay request from other parties will not be entertained since they have no substantial interest in the disposition of the motion. In ruling on the motion, the reviewing tribunal will consider only the first two stay factors specified in 10 CFR 2.788(e) (whether the moving party has made a strong showing that it is likely to prevail on the merits and whether the party will be irreparably injured unless a stay is granted). The third and fourth factors (harm to other parties and the public interest) are excluded because each has little bearing on the proper disposition of the motion. This mechanism is provided in a new § 2.713(c)(4).

Finally, the Commission has modified the third sentence of proposed § 2.713(c)(3) to require an Atomic Safety and Licensing Appeal Board or the Commission, as appropriate, to consider each appeal on the merits. The modification will ensure that an appeal would not be declared moot if the suspension has been "served" prior to appellate consideration.

5. Referral to the state bar: One commenter recommends deletion of the provision of proposed § 2.713(c)(3) relating to notification of the appropriate state bar(s) if an attorney's suspension is upheld at the conclusion of the appeal, since no corresponding sanctions are imposed on non-lawyers and no pattern of attorney misconduct is cited. The Commission does not agree with this recommendation. Attorneys have an independent ethical obligation under the American Bar Association's Code of Professional Responsibility to refrain from engaging in undignified or discourteous conduct when appearing before a court or administrative tribunal. (DR 7-106(c)(6)). Therefore, referral to the state bar(s) is appropriate in such cases.

However, proposed § 2.713(c)(3) implies that if an attorney receives a suspension exceeding 1 day and does not appeal, there is no referral to the state bar. The Commission has clarified the rule by requiring mandatory referral of attorneys whose suspensions exceed 1 day even when no appeal is taken.



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Referral should not depend upon whether an appeal is taken. Logic teaches that a suspended attorney who does not appeal may be more guilty than his peer who elects to appeal; therefore, both attorneys should be referred to the state bar if the suspension exceeds 1 day.

Pursuant to section 161(p) of the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552, 553 and 555(b) of Title 5 of the United States Code, the following amendments to Title 10, Chapter 1, Code of Federal Regulations, Part 2 are published as a document subject to codification, to be effective on November 21, 1980.

➤ 45 FR 73465  
Published 11/5/80  
Effective 11/5/80

### 10 CFR Part 2

#### Rules of Practice for Domestic Licensing Proceedings

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Commission is amending its rules of practice to conform the time permitted under 10 CFR 2.206(c) and 2.786(a) with its revised internal operating procedures which provide that the Commissioners have ten (10) working days to review the decision of the appropriate Office Director or of the Appeal Board and the advice of the General Counsel.

**EFFECTIVE DATE:** November 5, 1980.

**FOR FURTHER INFORMATION CONTACT:** Mark E. Chopko, Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, 202/634-3224.

**SUPPLEMENTARY INFORMATION:** NRC regulations provide that the Commission may decide to review, on its own motion, a decision of the Appeal Board within thirty (30) days of the decision or after a petition for review is filed, whichever is later. 10 CFR 2.786(a), as amended 45 FR 45890 (July 8, 1980). In addition, § 2.206(c) provides that the Commission may decide to review a Director's decision within twenty (20) days of the decision. In both instances the time had been divided between review of the matter by the Office of the General Counsel in order to advise the Commissioners on a proposed course of action and consideration of the matter

by the Commission. The Commission has recently adopted a revised set of internal operating procedures that now would provide ten (10) working days for Commissioner action. In order both to provide for adequate review in the Office of the General Counsel and to provide sufficient time for Commission consideration in conformance with the new operating procedures, the Commission has decided to amend its rules to add additional time for consideration of such decisions.

Section 2.786(a) will be amended to provide forty (40), instead of the existing thirty (30), days for Commission consideration of Appeal Board decisions on its own motion. This change does not affect the rest of § 2.786(a) including the recent amendment. 45 FR 45890. In addition, § 2.206(c)(1) will be amended to provide twenty-five (25), instead of the existing twenty (20), days for Commission consideration of a Director's decision.

Because this amendment relates solely to matters of agency procedure, notice of proposed rulemaking and public procedure thereon are not required by section 553 of Title 5 of the United States Code and shall be omitted from this proceeding. As rules applying only to internal agency procedure, these final rules will be effective November 5, 1980.

Accordingly, pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of Title 5 of the United States Code, the following amendment to Title 10, Chapter I, Code of Federal Regulations, Part 2, is published as a document subject to codification:

➤ 45 FR 74693  
Published 11/12/80  
Effective 11/28/80

*Licensing Requirements for the Storage of Spent Fuel in an Independent Fuel Spent Storage Installation*

See Part 72 Statements of Consideration

## PART 51 • STATEMENTS OF CONSIDERATION

### Separate Views of Commissioner Bradford on S-3

I

I am concurring in the latest version of the S-3 table with the understanding that it is to be extensively supplemented. Today's decision does improve somewhat on the present interim version. However, it remains a document with four weaknesses that will have to be improved through the promised narrative and update proceeding. The weaknesses are the zero release repository judgment, the reprocessing scenario, the procedural underpinning, and the absence of a clear statement of the health effects and time commitments involved. Additionally, I do not agree with the ambiguous and pointless restriction on the litigation of the technetium issue and would prefer to handle it as was agreed to by four Commissioners on May 3, 1979.

I can concur in the "zero release" number only because it is better founded than the same figure in the present interim version, and because, as the Commission states, this assumption does not appear to affect the S-3 table's overall conservatism. Nonetheless, there are uncertainties here, and the Board's summary of the record has not done them justice.<sup>1</sup> The forthcoming narrative will, in my view, need to address this subject.

Furthermore, I think that the Commission goes too far in terming its assumption that a "bedded salt repository or its equivalent will be found" to be a "judgment." I think that little more can be said by a prudent regulatory agency at this time in the face of this record and the general uncertainty than that the direction of current federal programs makes a bedded salt repository a reasonable working assumption for NEPA purposes. That is really all that I think the staff testimony supports.<sup>2</sup>

More seriously, I continue to disassociate myself from the optimistic assessment of the waste management program cited by the majority that is in 42 Fed. Reg. 34391.<sup>3</sup> In July 1977, the Commission reached a sweeping conclusion on the sufficiency of what then passed for a waste management program without benefit even of a notice and comment proceeding, never mind a formal review. For this Statement of Considerations to reference that denial of a requested rulemaking as an expression of a Commission view on the safety of a waste repository proceeding is procedural farce of a low order. It should not be done here, especially in light of the commitment to a new generic proceeding.

As to reprocessing, I have concluded that Commissioner Gilinsky was in many respects correct in his dissenting views from our January 26, 1979 Memorandum on the scope of this rulemaking. Nevertheless, the record has now been built on what may be an unlikely case, and it seems to me the

Commission's decision so circumscribes it that the worst harms foreseen by Commissioner Gilinsky cannot result from any responsible reading of the current Statement of Considerations.

II

By memorandum of January 26, 1978, to the Fuel Cycle Rulemaking Hearing Board, the Commission ordered that the Board entertain requests for cross-examination of particular witnesses on specific factual issues where a showing could be made with particularity that this procedure was necessary for an adequate record. While the Commission left the decisions on cross-examination to the sole discretion of the Hearing Board, it expected that the Hearing Board would apply the procedures "in a sensitive and careful fashion so as to assure the ventilation and consideration of waste management issues called for in *NRDC v. NRC*, 547 F.2d 633 (D.C. Cir. 1976)." I dissented from the extraordinary discretion delegated to the Board and the restrictive criteria for cross-examination.

The Board was neither sensitive nor careful in its decision to deny all cross-examination. Rather than assuring the ventilation and consideration of waste management and disposal issues, the Board stifled full exploration of crucial and difficult subjects even when the staff, to its credit, did not object.

The denial of cross-examination on two particular issues serves to illustrate the consequences. The Sierra Club sought to cross-examine several witnesses on the release of technetium from the waste management and disposal fuel cycle facilities. The Board denied the request in general terms,<sup>4</sup> stating that many of the matters were not involved in this proceeding or not in serious dispute. Moreover, the Board said its review indicated that each subject was "fully ventilated" through other procedures. The Commission's finding on technetium rejects these conclusions of the Board. The Commission found that technetium releases should be included in Table S-3. However, because there was not sufficient evidence in the record to derive a release figure, the Commission ordered that the issue be litigable in individual proceedings. Thus the Commission, contrary to the Board, viewed the release of technetium both as being insufficiently serious dispute and so inadequately ventilated as to require further litigation.

By avoiding a full record on technetium, the Board has shown the futility of the Commission's procedural shortcut. As I noted in my January 26, 1979 dissent, the delays caused by withholding cross-examination can far exceed the "delays" inherent in cross-examination. The issue of technetium release now may be litigated in every individual licensing proceeding. Instead of being cross-examined once, staff witnesses are potentially subject to cross-examination in many proceedings, with licensing boards, the Appeal Board, and possibly the Commission reviewing the record of each case.

The Board also refused to allow cross-examination regarding the uncertainties of bedded salt as a waste medium. This refusal was particularly unfortunate since, as noted by the petitioner for cross-examination, it came immediately after the DOE Task Force

on Nuclear Waste Management stated it was "aware of scientific issues concerning the adequacy of salt as suitable geologic medium for emplacement of concentrated waste exhibiting high surface temperatures." (Report of Task Force for Review of Nuclear Waste Management, U.S. DOE at 9, February 1978).

One of the issues on which NRDC requested cross-examination was the staff's lack of analysis of media other than salt. Now, without this inquiry, the Commission makes a "judgment" that an "equivalent" to a bedded salt repository will be found. This statement rests on some statements from the IRC Report, issued after the hearing was over.<sup>5</sup> Thus the Commission has, through the dubious procedural device of its "irrevocable delegation," treated a subordinate board like a distant and separate part of the government and has thereby cost itself any chance to correct the weakness of the record.

In refusing to permit cross-examination on waste disposal, the Board has kept perfect the past record of the Commission's obsessive need not to know about the uncertainties regarding its waste disposal assumptions. While continuing to express "confidence" that the wastes can and will be disposed of safely and while judging that a bedded salt repository or its equivalent will

be found which will have a zero release after it is sealed, the Commission has never allowed a proceeding to take place where witnesses supporting these views could be cross-examined.

While this approach has been found by courts not to be inconsistent with Congressional intent, it is inconsistent with an accurate appraisal of the consequences of new licensing actions. I would rather that this agency had looked less for the legally acceptable minimum procedures and more for a process that gave the Commission and ultimately the public the most accurate possible conception of the environmental commitments being made on its behalf.

### Separate Views of Commissioner Gilinsky on Final Adoption of the S-3 Rule

In February the Commission decided to go forward with a final table of nuclear fuel cycle environmental impacts (S-3) without waiting for the narrative explanation which it directed the NRC staff to prepare to accompany the table. Without such an explanation of the effluent release values in terms of radiological dose commitments and associated health effects, there is not much use a licensing board can make of the table in deciding whether or not to approve a license. The new table is in fact almost identical to the interim table in use now. The major effect of adopting a final rule now without an explanatory narrative is to relieve pressure for the narrative's preparation. To avoid this result I earlier urged the Commission to hold up promulgation of a final rule until the narrative is available and approved by the Commission.

<sup>1</sup>See for example, Transcript, p. 729. The Commission improves upon the Board's understatement in its Footnote 24, p. 40. However, the IRC report itself at that point contains a dissenting view from members who felt that insufficient attention was given to "significant gaps and uncertainties in our current technical understanding."

<sup>2</sup>Transcript, p. 534, 575.

<sup>3</sup>Memorandum and Order, p. 41.

<sup>4</sup>Memorandum and Order, May 4, 1978.

<sup>5</sup>Report to the President by the Interagency Review Group on Waste Management, TID-29442, March 1979.

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At issue is each reactor's share of effluent releases from the operation of the overall nuclear fuel cycle. But the table values do not depend on the characteristics of the specific powerplant that is the subject of a licensing proceeding—they do not distinguish among reactors. As a consequence, it is virtually inconceivable that the table would affect the outcome of any such a licensing proceeding before one of our boards. A finding that the reactor's share of the fuel cycle effluents outweighs the benefits of the plant in terms of the electric power it delivers is tantamount to a conclusion that no reactor should be licensed.<sup>1</sup> As a practical matter, such a finding, reaching the very core of NRC decisionmaking could—and should—come only from the Commission itself. If there is doubt about the outcome of this question the Commission should address it directly. By not addressing it and by dealing instead with the fuel cycle environmental impacts in reactor licensing proceedings by handing the licensing boards a table of effluent releases the Commission is in effect saying that these impacts should not affect the outcome. That may in fact be the right conclusion; but if it is, the Commission should state it clearly and not hide behind a table of numbers.

There is another reason for my disagreement with the Commission's action in approving the final rule. I would not adopt at least one of the values in the table—the zero expected release from a high level waste repository. I am concerned that the Commission's expressed confidence in the perfect long term operation of such a waste depository may be misplaced, especially in view of its being based on a general examination by the Board in this proceeding of the bedded salt repository concept.

In this regard, I note that the D.C. Circuit Court of Appeals in *Minnesota v. NRC* has remanded to the Commission the question of whether there is reasonable assurance that wastes can be disposed of safely and at what point in time disposal can reasonably be effected. I think that the generic proceeding which the Commission plans to conduct in response to the D.C. Circuit's decision will give us an appropriate vehicle for a thorough-going evaluation of the problems involved in the government's commitment to a waste disposal solution and the likelihood that such a program is not only feasible but is also on course.

No such repository has yet operated. The prospective constructors of such a repository have not yet agreed on a design or even chosen a geologic medium. It seems anomalous, at this stage, for the regulators to express more confidence on this score than the repository designers and builders themselves have expressed.

I would add two brief comments. I previously argued that there was no need to include in this analysis an option for reprocessing, especially the contrived reprocessing mode which was considered in this hearing. The inclusion of this option has indeed complicated and lengthened the proceeding.

<sup>1</sup> The notion that the fuel cycle effluents add to one side of the "NEPA balance" and thus might tip it in some cases and not in others is naive.

Also, I have come to agree with Commissioner Bradford that the Commission should not have delegated to the S-3 Hearing Board the discretion to make final determinations on whether or not to allow cross-examination on issues arising in the course of the proceeding.

➤ 45 FR 74693

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Effective 11/28/80

*Licensing Requirements for the Storage of Spent Fuel in an Independent Fuel Spent Storage Installation*

See Part 72 Statements of Consideration

## PART 70 • STATEMENTS OF CONSIDERATION

**Register.** Based on the public comments and other considerations, the Commission has adopted the proposed amendments, with modifications as set forth below.

The effective physical protection amendments are designed to have overall equivalency to the recommendations of INFCIRC/225 Rev. 1, but there are differences in the detailed requirements. INFCIRC/225 Rev. 1 recommendations are designed to minimize the possibilities of theft or sabotage of SNM of moderate or low strategic significance. The effective amendments have been primarily designed to require early detection of theft of SNM of moderate or low strategic significance. However, in requiring early detection capabilities, these amendments deter the possibilities of theft or diversion. In the judgment of the Commission, the degree of protection afforded by the containment, monitoring and detection procedures required by these amendments provide equivalency to the INFCIRC/225 Rev. 1 recommendations for protection of theft or diversion of SNM.

Significant differences from the proposed rule published for comment on May 24, 1978 are: (1) Plutonium-Beryllium (PuBe) sealed sources would be exempted from the physical protection requirements; (2) Plutonium with isotopic concentration exceeding 80 percent in plutonium-238 would be exempted from the physical protection requirements; (3) package and vehicle search requirements at facilities where special nuclear material of moderate strategic significance is used or stored have been changed; (4) The period of time allotted for submittal of a licensee plan to implement these requirements has been changed from 60 days to 120 days after the effective date of the amendment. In addition, editorial and clarifying changes were made and some definitions added to clarify the intent of the regulations.

The following discussion pertains to items (1) through (4) above.

(1) PuBe sealed sources—Commenters stated that the cost of providing the required physical protection for PuBe sealed sources would be prohibitive from the point of view of the limited budgets available at universities where most of the sources are now located. Imposition of the proposed requirements, it was said, would result in the curtailment of the use of PuBe sources at some sites with a significant impact on the educational and research programs at those institutions. In view of the very small quantities of plutonium found in PuBe sealed sources (generally, from 16 to 161 grams) and the fact that

potential adversaries wishing to obtain a 5 kg formula quantity of plutonium would have to commit separate acts of theft at a large number of widely separated sites without being detected, the Commission has decided that the threat to the common defense and security of this country was sufficiently low that physical security measures should not be required for PuBe sealed sources. There is an upper limit of 500 grams of plutonium to which this exemption can be applied because greater than a 500 gram accumulation of plutonium in this form invalidates the basis for this exemption. IAEA guidelines allow for such exceptions in the case of research type facilities.

(2) More than 80 percent Pu-238—The proposed rule has been amended to reflect that plutonium with isotopic concentration exceeding 80 percent in plutonium-238 would be exempted from the physical protection requirements. This change corrects an oversight in the initially proposed amendments in which it was intended that such material would be exempted to be consistent with the definitions of Category II and III material in the IAEA document INFCIRC/225/Rev. 1.

(3) Search requirements—Package and vehicle search requirements at facilities at which special nuclear material of moderate strategic significance is used or stored have been changed. As revised, random searches are only required regarding items leaving controlled access areas, and not of those entering. The primary objective of entry searches is to detect materials which could be useful in sabotage. Since protection against sabotage is not within the scope of the proposed amendments, an entry search requirement is not necessary.

(4) Submission and Implementation of Plans—Several commenters stated that more time would be needed than the sixty days allowed for submission of physical security plans, or amendments to them, following the date the proposed amendments become effective.

The Commission agrees that more time may be required, especially in the case of licensees who have limited managerial and financial resources, and has changed the submission date to be 120 days following the effective date of the amendment. In addition, the licensee is now required to implement the approved security plan within 240 days following the effective date of the amendment or within 30 days after the plan is approved, whichever is later.

Concurrent with the publication of the amendments, the NRC is publishing a guide entitled "Standard Format and Content for the Licensee Physical Security Plan for the Protection of

Special Nuclear Material of Moderate or Low Strategic Significance." The guide is being published for a sixty-day comment period and will be reissued with comments taken into consideration. The amendments to 10 CFR Parts 70, 73 and 150 would become effective at this time (120 days after publication) (November 21, 1979). Licensees would therefore have 240 days after publication of the amendments to submit their plans. The plan would have to be implemented 30 days after approval by the Commission or 360 days after (date of publication in the Federal Register) (July 24, 1979).

Another area of comment dealt with employee screening. Some of the licensees interpreted the screening requirement to call for a full field background investigation of all personnel entering the controlled access areas where the material is used or stored. The wording of the rule has been revised to more clearly indicate that the requirement is merely one requiring a screening based on knowledge of persons permitted access rather than a formal security investigation. The guidance package being issued with the rule explains more fully the intent of this requirement.

There was one other area of comment for which no specific changes were made to the amendments but which is of significance. These comments dealt generally with the technical justification for the proposed amendments.

Many of the commenters questioned the technical justification for the proposed amendments on the basis of the lack of detailed information regarding the threat; the additional costs of implementation they perceived to be incommensurate with only marginal improvements in physical protection; and the impacts on the licensees' ongoing educational and research programs. Particular attention was focused by some commenters on the physical protection requirements for low enriched uranium.

The technical justification for the U.S. adoption of the proposed amendments is contingent on both domestic and international factors, which are closely interrelated. Current NRC physical protection regulations apply primarily to strategic special nuclear material (uranium enriched in the isotope U-235 to 20% or greater, U-233, and plutonium) in quantities of five formula kilograms or greater. There are no specific physical protection requirements for quantities in lesser amounts. Yet, it can be properly argued that a 4.9 formula kilogram quantity of SNM is about as important a quantity as 5.0 kilograms. Multiple thefts of such materials in close to formula quantities could result in the



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accumulation of more than a formula quantity. The proposed detection requirements are considered to provide sufficient protection with minimum added cost so as not to affect educational and research programs. Since the requirements are of a detection nature rather than prevention, characterization of the adversary in the regulations was deemed not to be necessary.

In regard to low enriched uranium (LEU) (enrichments less than 20%), clandestine enrichment to higher levels may go beyond the capability of subnational terrorists, but it does not go beyond the capability of other governments. Unless properly safeguarded, low enriched uranium could be stolen on behalf of foreign governments and enriched to explosive useable levels after it is smuggled out of the U.S.

The Nuclear Non-Proliferation Act of 1978 specifies that NRC shall promulgate regulations which assure that physical security measures are provided to special nuclear materials exported from the United States without specifying whether the materials are low enriched uranium or high enriched uranium. Pursuant to this legislation, the Commission has promulgated 10 CFR Part 110.43 which provides among other things that:

"(b) Commission determinations on the adequacy of physical security programs in recipient countries for Category II and III quantities of material will be based on available relevant information and written assurances from the recipient country or group of countries that physical security measures providing as a minimum protection comparable to that set forth in INFCIRC/225 will be maintained."

While the proposed amendments would provide a needed extension of domestic physical protection to special nuclear materials for which the level of physical protection required was not previously specified, the full value of such protection could not be realized until similar protection is afforded all such material among the nations utilizing such materials. Physical protection measures similar to those proposed, which are based on the recommendations of the IAEA Information Circular INFCIRC/225/Rev. 1, have already been adopted by several countries.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Parts 70, 73, and 150 are published as a document subject to codification.

44 FR 47918  
Published 8/16/79  
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*Licensing of Production and Utilization Facilities; Facilities and Access for Resident Inspection*

See Part 50 Statements of Consideration.

44 FR 68184  
Published 11/28/79  
Effective 3/25/80

*Physical Protection Upgrade Rule*

See Part 73 Statements of Considerations.

45FR14199  
Published 3/5/80  
Effective 3/5/80

*Minor and Clarifying Amendments*

See Part 1 Statements of Consideration

45 FR 18905  
Published 3/24/80  
Effective 3/24/80

*Deletion of reference to Panama Canal Zone; Minor Amendments*

See Part 4 Statements of Consideration.

45 FR 50705  
Published 7/31/80  
Effective 7/31/80

*Safeguards on Nuclear Material-Implementation of US/IAEA Agreement*

See Part 75 Statements of Consideration .

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*Emergency Planning*

See Part 50 Statements of Consideration

45 FR 65521  
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*Uranium Mill Licensing Requirements*

See Part 30 Statements of Consideration

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*Safeguards on Nuclear Material; Implementation of US/IAEA Agreement*

See Part 75 Statements of Consideration

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*Licensing Requirements for the Storage of Spent Fuel in an Independent Fuel Spent Storage Installation*

See Part 72 Statements of Consideration

UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS — ENERGY

**PART  
72**

**LICENSING REQUIREMENTS FOR THE STORAGE OF SPENT FUEL  
IN AN INDEPENDENT FUEL SPENT STORAGE INSTALLATION**

➤ 45 FR 74693

Published 11/12/80

Effective 11/28/80

**Licensing Requirements for the  
Storage of Spent Fuel in an  
Independent Fuel Spent Storage  
Installation**

**AGENCY:** U.S. Nuclear Regulatory  
Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is adding a new Part to its regulations to cover the specific licensing requirements for the storage of spent fuel in an independent spent fuel storage installation (ISFSI). Such activities are currently licensed under the Commission's general regulation for the Domestic Licensing of Special Nuclear Material, 10 CFR Part 70. Experience with licensing actions under this regulation demonstrated the need for a more definitive regulation to cover spent fuel storage in an ISFSI. This new Part was developed to meet this need.

**DATES:** Effective date: November 28, 1980.

**Note.**—The NRC did not submit this rule to the Comptroller General for a review of its reporting and recordkeeping requirements because the projected number of licensees involved, fewer than 10, makes it exempt from the Federal Reports Act, as amended, 44 USC 3512.

**FOR FURTHER INFORMATION CONTACT:** Dennis W. Reisenweaver, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, (301) 443-5910.

**SUPPLEMENTARY INFORMATION:** On October 6, 1978, the NRC published in the *Federal Register* (43 FR 46309) a notice of proposed rulemaking covering the storage of spent fuel in an independent spent fuel storage installation (ISFSI). In addition, copies of the proposed rule with a request for comments were sent to individuals, organizations, and government agencies thought to be potentially interested in this subject.

Seventy letters, containing more than 600 individual comments, were received in response to this request. Individual letters were submitted on behalf of several contributors. In addition,

comments were received from interested NRC staff members. The comments covered generic subjects in addition to ones addressed to specific sections of the draft rule. After a careful consideration of all of the comments received, the Commission has adopted 10 CFR Part 72 in effective form. Major issues contained in these comments and resulting changes in the rule are discussed below. The detailed responses to individual comments are documented in NUREG-0587, "Analyses of Comments on 10 CFR Part 72." Copies of this report are available from the Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

**Issues Addressed in Public Comments**

1. *Need for a Rule at This Time.* Fifty commenters showed a broad recognition of the need for the proposed rule at this time and endorsed this action by the NRC, although exceptions were taken to some of the specific requirements. Twelve commenters were opposed to this rule and its promulgation at this time. For example, some of these commenters expressed a concern that the promulgation of a rule covering spent fuel storage would decrease pressures on both industry and government to solve the radioactive waste problem. Others advocated a halt to the generation of spent fuel, i.e., shut down nuclear power plants until the waste problem is solved.

Following the President's deferral of reprocessing of spent fuel in April 1977 came the general recognition that, regardless of future developments, spent fuel would have to be stored for a number of years prior to its ultimate disposition, and that the storage of spent fuel in an ISFSI would be a likely additional new step in the nuclear fuel cycle. The NRC expects a number of license applications covering this activity in the near future. Part 72 establishes specific regulatory requirements for this activity.

It is the judgment of the Commission that the promulgation of Part 72, which is designed to codify certain existing regulatory practices and better define licensing requirements covering the

storage of spent fuel in an ISFSI, is consistent with the NRC objective of having applicable regulations in place to meet anticipated needs.

2. *Purpose and Scope of Part 72.* In the opinion of those commenters who consider spent fuel to be a high-level waste, the licensing of spent fuel storage is the de facto licensing of the temporary storage of high-level wastes. Others commented that Part 72 could be expanded to cover the temporary storage of high-level wastes in a facility like an ISFSI to allow further radioactive decay prior to placement in a repository.

Part 72 is limited in scope to the temporary storage (up to 20 years with renewal at the option of the Commission) of spent fuel (and radioactive materials associated with spent fuel storage) in facilities designed specifically for this purpose. The purpose of Part 72 is to prescribe the regulatory requirements for this activity.

The Commission has stated that spent fuel from power reactors is high-level waste for the purposes of Section 202(3) of the Energy Reorganization Act.<sup>1</sup> Thus an ISFSI that is operated by the Department of Energy must be licensed by NRC.

3. *De Facto Support of Nuclear Power.* Some commenters interpreted the promulgation of Part 72 as de facto support by the Commission of the continuing production of electricity by nuclear power (and its resultant waste generation) without a national waste management policy. The Commission's intent in promulgating Part 72 is simply to have applicable regulations in place for the protection of the health and safety of the public and of the environment if applications are received for the storage of spent fuel in an ISFSI. The Commission's position on the subject of waste management was addressed in the *Federal Register* notice on 10 CFR Part 51, published on August 2, 1979 (44 FR 45362) promulgating a final rule which sets out in Table S-3, Table of Uranium Fuel Cycle Environmental Data, revised environmental impact values for the

<sup>1</sup> Statement of Dr. Joseph R. Hendrie, then Chairman of the U.S. Nuclear Regulatory Commission before the Committee on Energy and Natural Resources, U.S. Senate, May 10, 1979.

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uranium fuel cycle including waste disposal and the notice of proposed rulemaking on 10 CFR Parts 50 and 51, "Storage and Disposal of Nuclear Wastes," published on October 25, 1979 [44 FR 61372].

4. *Adequacy of Technology Base.* A number of commenters questioned the adequacy and availability of the technology base for the development of a rule covering extended spent fuel storage. In fact, there is a very broad technology base for both wet and dry modes of spent fuel storage for the contemplated lifetime of an ISFSI.

Water basins are simple structures that have been used since the mid-1940s for the handling, transfer and storage of spent fuel and other highly radioactive sources such as  $^{60}\text{Co}$  and for the shielding of research reactors, initially at government plants and later at commercial reactors. The engineering practices and procedures involved in their design and construction are well established. The operation of a water basin is also straightforward, the water chemistry is well established, and the maintenance of high quality basin water is readily achievable. These water conditions are essentially non-corrosive to both the materials involved in the basin itself and the components of spent fuel assemblies from commercial light water reactors. Both experience and theoretical analyses of basin storage conditions indicate that spent fuel can be stored underwater for several decades without serious degradation.

Although dry storage has not been used for commercial light water reactor (LWR) fuels, dry storage has been used for a number of years for other types of spent fuels and other highly radioactive materials, particularly at the Idaho Nuclear Engineering Laboratory. Dry storage is used for spent MAGNOX fuels at the Wylla Power Station in Wales. Canada is developing dry storage for CANDU reactor fuels, and the U.S. Department of Energy (DOE) is evaluating the storage of high burnup LWR fuels both in concrete and steel canisters similar to the Canadian design and in near-surface dry well storage at the Nevada Test Site.

5. *Is Spent Fuel Storage a Low Risk Operation?* Some commenters questioned whether the extended storage of spent fuel is a low risk operation as stated in the preamble to the proposed rule.

Radiological risks to the public result from a release of radioactive materials and their dispersal to the environment. Once in place, spent fuel storage is a static operation and during normal operations the conditions required for the release and dispersal of significant

quantities of radioactive materials are not present. There are no high temperatures or pressures present during normal operations or under design basis accident conditions to cause the release and dispersal of radioactive materials. This is primarily due to the low heat generation rate of spent fuel with more than the one year of decay before storage in an ISFSI required by the rule and with the low inventory of volatile radioactive materials readily available for release to the environs.

However, it is essential to maintain safe storage conditions. For water basins, this means that the pool structure, storage racks and possibly other items such as crane tie-downs, must be designed to withstand the maximum potential natural phenomena, including earthquakes, to which the ISFSI may be exposed. For this reason, the rule stresses the selection of sound sites and designing for the most severe natural phenomena reported for the site and surrounding area. The same considerations are applicable to ISFSI designs other than water basins.

6. *Coverage of Dry Storage and Existing Facilities.* A number of commenters suggested that the purpose and scope be written in more definitive language and specifically to cover dry storage and other radioactive materials associated with spent fuel, recognizing that this was intended in the proposed rule. The wording was changed for improved clarity in response to these suggestions. In addition, paragraph 72.2(c) was added to the scope to clarify the fact that this rule covers both wet and dry storage. Other appropriate changes were made in the body of the rule to further clarify this point.

7. *Types of Fuel Covered and Decay versus Fuel Characteristics.* Comments were received suggesting that the rule be broadened to cover other than LWR spent fuel, e.g., CANDU reactor fuel that might be received from abroad. In response, the definition of spent fuel was broadened to cover all types of power reactor fuels. An ISFSI would have to be designed to accommodate the types of spent fuel to be stored, and any restrictions on fuel types would be a subject of license conditions.

Some commenters questioned the one-year decay stipulation, preferring that this requirement be expressed in terms of specific power, burnup, or other pertinent fuel characteristics. In practice, specific power is important only for freshly discharged fuel as the power level prior to shutdown is the controlling factor for the concentration of short-lived radionuclides present in spent fuel. The long lived radionuclides

present in spent fuel are proportional to burnup; but within the limits of expected burnups, this is not a significant factor for spent fuel aged more than one year.

The one-year decay stipulation has been retained as this is a basis for the requirements of Part 72, i.e., the presumption is made that no short-lived radionuclides are present and the levels of volatile radioactive materials are very substantially reduced.

Inasmuch as the definition of spent fuel eligible for storage in an ISFSI [Section 72.3(v)] specifies that the fuel must have undergone at least a year's decay since its irradiation in a power reactor, any facility for temporary storage of fuel irradiated in a power reactor which has not undergone a year's decay would be licensed under Part 50 rather than Part 72.

8. *Definition of Temporary Storage.* In response to comments, a definition of temporary storage has been added as paragraph 72.3(x). Temporary storage, in the context of Part 72, means "interim storage of spent fuel for a limited time only, pending its ultimate disposal."

9. *Material Versus Facility License.* Some confusion and misunderstanding over the differences between a Part 70 "material" license and a Part 50 "facility" license was reflected by a number of commenters. Under Part 70, a licensee is authorized to receive title to, own, acquire, deliver, receive, possess, use, and transfer special nuclear material for a stated purpose, such as fuel manufacturing, to be carried out in an approved plant complex; however, the plant itself is not licensed but its operation is regulated. Under Part 50, a licensee is authorized to transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess or use a production or utilization facility, as defined by the Atomic Energy Act; the license covers the facility, not the material. The possession of fuel by a reactor licensee is covered under a Part 70 license, which is incorporated into the Part 50 license. The licensing of spent fuel storage in an ISFSI under Part 72 is a material type of license; however, Part 72 includes requirements for an ISFSI that are conditions under which a license to possess spent fuel will be issued.

10. *One License Application and One Safety Analysis Report.* For some time the NRC has endeavored to simplify its regulations and licensing activities. As spent fuel storage in an ISFSI is a simple operation, does not require a complex plant and is subject to few controversial technical issues, a one step licensing procedure requiring only one application and one SAR was adopted in Part 72. This one step licensing procedure was

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the subject of a number of comments. It is believed that the rewording of the text of the rule plus the discussions of individual comments in NUREG-0587 have clarified requirements and the one application and one SAR requirement has been retained in Part 72. However, it should be recognized that locating an ISFSI on a nuclear power plant site may require an amendment to the Part 50 license to take into account possible interactions with the ISFSI.

Section 2.764 of 10 CFR Part 2 has been amended by adding a new paragraph (c) which provides that an initial decision directing the issuance under 10 CFR Part 72 of an initial license for the construction and operation of an independent spent fuel storage installation (ISFSI) shall not become effective until review by the Commission has been completed and that the Director of Nuclear Material Safety and Safeguards shall not issue such an initial license until expressly authorized to do so by the Commission. This amendment does not affect and is not intended to alter in any way the previous action of the Commission temporarily suspending the immediate effectiveness rule (10 CFR 2.764 (a) and (b)) in certain proceedings as provided in Appendix B to Part 2 (44 FR 65049 November 9, 1979.)

**11. Accident Analyses.** A number of comments addressed the subject of accident analyses, particularly an apparent inconsistency between the 24-hour inhalation/ingestion dose addressed in paragraph 72.15(a)(13) and the 2-hour direct radiation dose used as a site evaluation factor in § 72.67.

In response to those comments and upon further consideration, paragraph 72.15(a)(13) was revised to require accident analyses to cover both immediate dose and long-term dose commitment based on the duration of the postulated event rather than on an arbitrary time limit. Accident criteria to be used in site evaluation were removed from §§ 72.65 and 72.67 and placed in a new § 72.68 which addresses the criteria for establishing the controlled area for an ISFSI.

**12. Decommissioning Plan.** The requirement in Part 72 that the license application include a plan for decommissioning of the proposed ISFSI and the financial arrangements therefore were the subject of many comments. The reason for this requirement is that the decommissioning plan provides design input (see § 72.76) and the basis for the costs of decommissioning. Part 72 makes it a requirement that adequate financial arrangements to cover the cost of

decommissioning should be made before a license is issued.

Although decommissioning of an ISFSI should require only the removal of surface contamination, planning for decontamination and decommissioning is an essential element of design input. The value of a decommissioning plan being developed at the license application stage is that this plan demonstrates the extent to which the proposed ISFSI has been designed for decommissioning.

The provisions for financing the ultimate decommissioning of an ISFSI were also the subject of many comments reflecting that this is a problem yet to be resolved. This should not be a serious problem as the cost of decommissioning an ISFSI that is designed for decommissioning should be small compared to these costs for some other nuclear facilities.

**13. Prequalification of Part 50 Licensees.** Some commenters, particularly utilities, suggested that Part 50 licensees should be considered to be prequalified. This suggestion was not adopted, although no serious difficulty is anticipated in the qualification of a Part 50 licensee. A Part 50 licensee must satisfy the requirement in Part 72 that an applicant have an adequately trained staff committed to the design, construction and operation of the proposed ISFSI. The storage of spent fuel in an ISFSI is a low risk operation provided the ISFSI is designed, constructed and operated in accordance with required standards. A commitment to this effect on the part of an applicant is considered important.

**14. Required Detail and Updating of the SAR.** Questions were raised on the required detail in the SAR and its updating. The single license granted under Part 72 prior to the start of construction requires considerable detail in the license application, particularly in the SAR. There must be sufficient detail to: (1) Support the findings enumerated in § 72.31 for the issuance of a license, and

(2) Serve as the bases for both the license conditions applicable to design and construction and the license conditions, including technical specifications, applicable to operations.

The wording has been changed throughout the rule to clarify this point. Updating the SAR during the design and construction phase of the project is required. However, such updating is limited to an elaboration or modification of the information in an approved SAR. Any changes involving an unreviewed safety question require an amendment to the license. An annual updating of the SAR after the ISFSI is built is required

even if no changes have been made. The annual updating will also address the significance of any changes to codes, standards, regulations, or regulatory guides which the licensee has committed to meeting that are applicable to the design, construction, or operations of the ISFSI. Changes at an ISFSI after it is built are expected to be limited to support systems with only marginal safety significance. This requirement is comparable to that of the proposed amendment to § 50.71 of 10 CFR Part 50, commonly referred to as the "FSAR Update Rule."

**15. Content of Environmental Reports.** The content of the environmental report required by § 72.20 was the subject of a number of comments. The environmental report required for an ISFSI is an evaluation of the environmental impact of the ISFSI on the region in which it is located, including the transportation that is involved. Discussions of generic issues covered by DOE and NRC generic environmental impact statements may be incorporated by reference.

**16. Provision for Public Hearings and State and Local Participation in the Licensing Process.** A number of commenters expressed concern over the omission in proposed Part 72 of any reference to public hearings or other provisions covering state and local participation in the licensing process. In accordance with the requirements of Sec. 109a of the Atomic Energy Act, as amended, which provides in part "... the Commission shall grant a hearing upon the request of any person whose interest may be affected by the proceeding . . .," the Office of Nuclear Materials Safety and Safeguards has established the practice of publicizing proposed spent fuel storage licensing actions and holding public hearings on a request by any person whose interest may be affected. A section based on the provisions of §§ 2.104 and 2.105 of 10 CFR Part 2, has been added to the rule (See § 72.34).

**17. Applicability of License Conditions.** Some commenters raised questions on the content and applicability of license conditions, recognizing that license conditions are an important aspect of the single preconstruction license issued under Part 72. In response to these comments, the wording of § 72.33 was changed to clarify the point that license conditions are applicable to design, construction, and operational activities. Since license conditions applicable to ISFSI operations are technical in nature, these have been identified by the more



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familiar term "Technical Specifications."

18. *At-Reactor versus Away-From-Reactor Siting.* Some commenters favored restricting the siting of ISFSIs to reactor sites, with the thought that this might reduce perceived transportation risks and keep pressure on the nuclear industry to help solve the waste management problem. Others favored away-from-reactor siting, perceiving this to be safest solution even though transportation might be increased.

Also, some commenters interpreted the promulgation of Part 72 as reflecting an NRC bias favoring away-from-reactor siting. This conclusion is not correct. The NRC is not aware of any compelling reasons generally favoring either at-reactor or away-from-reactor siting of an ISFSI. There are many factors to be considered in each situation and in the licensing actions involved; accordingly, the rule permits either.

19. *The Use of New Site-Related Terms.* One subject of particular interest to many commenters was the use in Part 72 of new site-related terms ("controlled area," "neighboring area" and "region,") rather than the more familiar site-related terms used in 10 CFR Parts 20 and 100.

Several considerations went into the development of new terms for site-related areas around an ISFSI. While the terminology used in 10 CFR Part 20, specifically 'restricted' and 'unrestricted' areas, applies to all nuclear facilities, it is limited to radiation protection concerns associated with normal operations and the means used by the licensee to control the access to areas of potential radiation exposure. With the advent of as low as is reasonably achievable objectives and environmental radiation protection standards promulgated by the Environmental Protection Agency in 40 CFR Part 190, the term "unrestricted" used in 10 CFR Part 20 is too narrow in meaning for applications to areas beyond the boundaries of the licensee's property.

The current terminology used in 10 CFR Part 100, specifically 'exclusion area' and 'low population zone', is applicable to postulated radiological consequences to individuals beyond the site boundary from potential accidents in test and power reactors. Its applicability is limited to specific types of nuclear reactors, not other nuclear installations, and to well-defined reference dose guidelines and risks associated with such nuclear reactors. The terminology used in 10 CFR Part 100 is too restrictive in meaning for use at multi-purpose sites and was never

intended to be used for other than reactor sites. The use of these terms from 10 CFR Part 100 for an ISFSI is inappropriate.

Furthermore, the "Report of the Siting Policy Task Force," NUREG-0625, has recommended several changes in the basic criteria of 10 CFR Part 100. Therefore using the current terminology of 10 CFR Part 100 in 10 CFR Part 72 is not appropriate due to the potential changes that may be made in Part 100. For example, it is proposed to change the term (and definition) of "low population zone" to "emergency planning zone" (EPZ). This terminology was used in the proposed revision of Appendix E (now titled "Emergency Planning and Preparedness for Production and Utilization Facilities") to 10 CFR Part 50, that was published for comment on December 19, 1979. Consistent with this proposed revision, the term "neighboring area" in 10 CFR Part 72 has been changed to "ISFSI Emergency Planning Zone" (ISFSI-EPZ) because these are comparable in concept. The size of an ISFSI-EPZ is expected to be much smaller than that of a reactor EPZ.

20. *Criteria for Establishing the Controlled Area, Neighboring Area,<sup>1</sup> and Region as Applied to the Site of an ISFSI.* A number of commenters expressed the need for criteria for establishing the controlled area, the neighboring area and the region for an ISFSI as these terms are used in Part 72 and noted that there was a potential conflict of terms in the proposed rule. In response to these comments, more definitive criteria have been incorporated in the pertinent sections of the rule and clarifying changes in the text and definitions have been made.

Another concern with the implementation of these defined areas for an ISFSI is the possible conflict in terminology for an ISFSI located on the same site with a nuclear power reactor licensed under 10 CFR Parts 50 and 100 requirements.

Part of this concern appears due to a misunderstanding and the impression that the controlled area for an ISFSI is the same as the exclusion area for a reactor and that the neighboring area (since changed to ISFSI-EPZ) for an ISFSI is the same as the low population zone for a reactor. In concept, these areas are similar but the bases for their establishment are different. The controlled area for an ISFSI is not the same as the exclusion area for a reactor because the design basis accidents are different. Reactor accidents involve a

<sup>1</sup>The term "neighboring area" has been changed to "ISFSI-EPZ."

potential release of radioactive materials, including short-lived species such as <sup>131</sup>I. Design basis accidents of concern at an ISFSI primarily involve direct radiation from exposure to the spent fuel rather than releases of radioactive materials. The areas requiring control or protective action measures for the protection of the public are quite different and hence using different terminology for each avoids confusion.

The four site-related terms and their definitions, i.e., site, controlled area, neighboring area (now ISFSI-EPZ), and region, establish each of the geographical areas and the interrelationship that would exist between these areas and the need to protect public health and safety and the environment. The site means the real property on which the ISFSI is located. The controlled area, which may or may not be the same as the site, has the purpose of defining licensee control for meeting regulatory licensing requirements. The controlled area, in most cases, will be enclosed by some physical barrier such as a fence, to provide the needed control of activities within the area. Beyond the controlled area, the licensee does not necessarily exercise authority over activities.

The ISFSI-Emergency Planning Zone (ISFSI-EPZ) is that area in the immediate vicinity of an ISFSI upon which local and State governments should base their radiological response plans. The requirement to define a neighboring area in the proposed 10 CFR Part 72, in which State and local governments could take protective action in the event of an emergency, is comparable in concept to the emergency planning zones for reactors. The term ISFSI-EPZ has been adopted to differentiate this zone and its requirements from those of an EPZ for a reactor.

The regions around an ISFSI site will vary in geographical area and location depending upon the event being evaluated to determine its impact on the ISFSI. A region has the purpose of defining the area within which such an event can have an impact on the public health and safety or environment. This impact must be assessed from the consequences postulated for the events evaluated.

21. *Dose Limits for Normal Operations and Accidents.* A number of commenters addressed the subject of dose limits for normal operations and accidents. Although spent fuel storage is not specifically identified as a fuel cycle operation in 40 CFR Part 190, "Environmental Radiation Protection Standards for Nuclear Power

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Operations," the dose limits specified in this regulation are used in Part 72. Section 72.67 was rewritten to better clarify the requirements on effluents and direct radiation during normal operations and anticipated occurrences.

The accident dose limit of 5 rem was placed in a new § 72.68, that defines the criteria for establishing a controlled area for an ISFSI. The 2-hour criterion was deleted; the controlling design basis accident for the specific ISFSI covered in the application is to be evaluated. The 5 rem cumulative exposure limit is derived from protective actions recommended by EPA for projected doses to populations for planning purposes.<sup>2</sup>

The reference to 24 hours in paragraph 72.15(a)(13) was deleted; the requirements for the accident analysis section of the SAR were changed to call for the evaluation of a dose commitment due to the event that would take into account the total dose from a single exposure as well as dose reduction due to protective action.

In response to comments on the applicability of Appendix I to 10 CFR Part 50 and Part 100 to an ISFSI, Appendix I is applicable only to light water cooled power reactors and Part 100 is applicable only to power and test reactors. Neither of these regulations is applicable to an ISFSI.

**22. Geological and Seismological Investigations.** In the proposed rule, the geological and seismological investigation requirements for an ISFSI site were based on the reasoning that it should be possible to select sound sites for the few ISFSIs expected to be built. Seismologically, a sound site was considered one having potential ground motion of less than 0.25 g from earthquake with a return period of 500 years. This earthquake potential could be determined on a probabilistic basis; i.e., read from seismic zonation maps such as those published by the U.S. Geological Survey.<sup>3</sup> Uncertainties in such determinations could be offset by overdesign.

This use of probabilistic techniques was considered appropriate as a site selection criterion; it was not intended to be used for determining the design earthquake for structures. Assuming a sound site as defined above, the use of a standard design earthquake of 0.25 g (which has a return period that is much greater than 500 years) was considered

conservative and adequate to offset uncertainties in an evaluation of a specific site on a probabilistic basis.

However, it was not possible to obtain a consensus among experts in the field on this approach. It was generally agreed that probabilistic techniques are adequate to determine potential seismicity on a regional basis, but these techniques are not yet adequately developed for application to a specific site.

As an alternative, the proposed rule allowed a site specific "g" value to be determined by the procedures of Appendix A to Part 100, "Seismic and Geologic Siting Criteria for Nuclear Power Plants." This provision was in Subpart E, "Siting Criteria," and was intended for use in the evaluation of site characteristics, such as potential soil liquefaction, under earthquake conditions in areas of low potential seismic activity where the use of the standard design earthquake of 0.25 g was considered to be unduly restrictive.

The final rule makes a differentiation between the regions east and west of the Rocky Mountain Front, approximately 104° west longitude, and in the east makes a further differentiation between areas of low seismic potential and areas of known seismic potential, including, but not limited to, New Madrid, Mo.; Charleston, S.C.; and Attica, N.Y.

In areas of low seismic potential in the eastern United States, a proposed site will be considered acceptable if the results from onsite foundation and geological investigation, literature review, and regional geological reconnaissance show no unstable geological characteristics, soil stability problems, or potential for vibratory ground motion at the site in excess of an appropriate response spectrum anchored at 0.2 g. Unstable geological characteristics are defined as capable faults, surface offset potential, subsidence or collapse features, uplift or downwarp, active tectonism, or landslide or mudflow potential. In the western United States and in regions of known seismic potential in the eastern United States, the seismicity at a proposed site must be evaluated by the criteria and level of investigations of Appendix A of 10 CFR Part 100, "Seismic and Geologic Siting Criteria for Nuclear Power Plants."

The conservatism reflected both in the use of a standard design earthquake of 0.25 g for the design of structures at sites in areas of low seismic potential or the alternative of developing a site specific design earthquake by the very thorough investigation required by Appendix A of Part 100 is considered necessary and

appropriate for the protection of an ISFSI which could contain a large inventory of spent fuel. The Commission is considering a revision of Appendix A to Part 100. However, it is anticipated that such revision would be in the nature of a clarification of its requirements and that the rule would still be applicable to ISFSI siting.

The principle of selecting sound sites has been retained in the final rule. For example, floodplains and sites that lie within the range of strong nearfield ground motion from earthquakes on larger capable faults should be avoided. This principle is consistent with the recommendations in the "Report of the Siting Policy Task Force," NUREG-0625.

**23. The ISFSI Design Earthquake (ISFSI-DE).** The standardized ISFSI-DE of 0.25 g for massive structures, such as water basins, has been retained in the final rule for use at sites east of the Rocky Mountain Front that are in areas of low potential seismic activity and hence do not need to be evaluated by the criteria and level of investigations of Appendix A of 10 CFR Part 100.

For sites west of the Rocky Mountain Front and in regions in the eastern United States of known seismic activity, the ISFSI-DE must be determined using the level of investigations and the criteria of Appendix A of 10 CFR Part 100, including the requirement that it be no less than 0.10 g.

For an ISFSI that is located on a power plant site which has been evaluated by the criteria and level of investigations of Appendix A of 10 CFR Part 100, the ISFSI-DE for structures shall be equivalent to the safe shutdown earthquake (SSE) for a nuclear power plant.

For ISFSI's which do not involve massive structures, such as dry storage casks and canisters, the required design earthquake will be determined on a case-by-case basis until more experience is gained with the licensing of these types of units.

**24. Probability Basis Used for Other Natural Phenomena.** Some commenters wanted to go one step further and use a probabilistic basis for other natural phenomena such as tornadoes and floods. It has been common practice in the United States to use probable maximum events as design bases for radiological safety-related structures, systems, and components. When a frequency or probabilistic analysis of historical data is used to estimate such a low probability event, there is generally too much uncertainty to make the estimate useful for design purposes. Therefore, the probable maximum flood, for example, is estimated using deterministic hydrologic models which

<sup>2</sup>EPA 520/1-75-001, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents," September, 1975.

<sup>3</sup>Such as Algermissen and Perkins, USGS, Open File Report 76-416, 1976, "A Probabilistic Estimate of Maximum Acceleration in Rock in the Contiguous United States."

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utilize meteorological input that approaches the upper limit possible for that location, taking into account existing climate and time of year.

**25. Prequalification of Reactor Sites and Their Population Distributions.** Some commenters recommended that reactor sites be prequalified with no site specific investigations required for an at-reactor siting of an ISFSI. While a site that has undergone a full safety and environmental review and has been approved for a Part 50 facility is likely to be found acceptable for a properly designed ISFSI, the pre-qualification of sites licensed under Part 50 without review in relation to the proposed design of the ISFSI does not seem prudent. Information on a specific site that has been submitted to the NRC in connection with other licensing actions need not be repeated in a Part 72 license application. It can be incorporated by specific references to previous submissions.

**26. Transportation Considerations.** A number of commenters considered that the transportation involved in spent fuel shipments to an ISFSI could be an important consideration in an evaluation of site suitability. This might be particularly true of a large installation. The Commission agrees and a new § 72.70 has been added to the rule to specifically address this point.

**27. Missile Protection.** Part 72 requires protection from natural phenomena with the exception of tornado missiles. Tornado missile protection at reactors is of concern because rupture of recently discharged fuel at a reactor could cause the potential release of volatile short-lived radionuclides, particularly  $^{131}\text{I}$ . Since the quantity of  $^{131}\text{I}$  present in aged fuel at an ISFSI is reduced a factor of  $10^9$  due to radioactive decay in the first year after discharge, the potential risk from the rupture of aged fuel is orders of magnitude lower for an  $^{131}\text{I}$  release. The radionuclides which could potentially be released as a result of a tornado missile event are long-lived  $^{85}\text{Kr}$  and  $^{129}\text{I}$ . However, an accident evaluation in NUREG-0575,<sup>3</sup> Section 4.2.3.2, using conservative assumptions demonstrates that the consequences from the release of the nuclides attributable to a tornado missile would not be significant. Hence, a requirement for protection from tornado missiles does not appear to be justified.

**28. Criticality.** A number of commenters expressed concern over the prospect of a criticality in an ISFSI.

Criticality has been a subject of study and experiment in the nuclear industry and has received much attention among nuclear engineers. The technology used in evaluating a given design for criticality potential is now highly developed with sophisticated computer codes. These codes have been benchmarked by actual measurements in various kinds of lattices and configurations of critical arrays of fuel elements. Because spent fuel storage racks are designed with a large safety factor to prevent criticality, the possibility of a significant criticality in ISFSI is very remote.

**29. Application of ALARA to Occupational Exposures.** Some commenters objected to the application of the ALARA principle to the design of a facility as this might affect occupational exposures. These objections were based on two points:

- (1) The thought that ALARA applied only to public health and safety, and
- (2) Occupational exposures are controlled by administrative procedures.

In response, the ALARA concept does apply to occupational health protection as specified in 10 CFR Section 20.1(c). Furthermore, although it is recognized that occupational exposures can be controlled to some extent by administrative procedures, design provisions such as adequate shielding of sources and proper equipment layout to minimize exposures are also important factors in keeping occupational exposures to a minimum. It is often impossible to fully compensate for a poor design using administrative procedures. ALARA (and its predecessor ALAP) has been a cornerstone of radiation protection for many years and it has always been considered to apply to all types of exposure, occupational and public.

**30. Broadened Applicability of Quality Assurance Program.** Some commenters took objection to what they interpreted as a broadening of the QA program, e.g., coverage of operations and the physical security system. It is the Commission's view that a licensee's QA program must cover not only design and construction, but all activities that are important to safety throughout the life of a facility.

**31. Certification versus Licensing of Operating Personnel.** The safety of an ISFSI is achieved by static means, primarily its configuration. Its safety is not dependent on dynamic reactions to the manipulation of controls like a reactor. It is necessary that operating personnel be adequately trained but not necessarily licensed by the NRC. A certification by the licensee of an

individual's proficiency to operate equipment is considered adequate.

**32. Definition of the term "Independent".** The meaning of the term "Independent" as used in Part 72 when applied to an ISFSI that is located on the site of another licensed facility, was the subject of a number of comments and considerable staff discussion.

An ISFSI may be a free-standing, away-from-reactor, fully independent type of facility or it may be located on the site of an existing facility such as a nuclear power plant. Such a location could have the economic benefit of sharing some utilities, services and personnel between the ISFSI and an existing facility on the site.

The rule is applicable to either type of location and an ISFSI may be provided with services from an existing facility and still be considered "independent." The use of services from an existing facility (i.e., electricity, makeup water, waste treatment, etc.) is allowable provided the Commission finds there is reasonable assurance that the construction and operation of the ISFSI will provide adequate protection to the health and safety of the public from the standpoint of both facilities involved.

Any physical connection between facilities must be evaluated, but any penetration of the reactor storage pool walls will be considered a conclusive showing that the ISFSI is not "independent" and hence is not within the scope of Part 72 and should be covered by licensing action under Part 50.

**33. Licensing Actions Involving Previously Licensed Facilities.** There are now in existence three facilities for spent fuel storage that have been subject to previous licensing actions. These are:

G.E.—Morris, Ill.—built under a Part 50 Construction Permit authorization as a reprocessing plant; spent fuel storage now licensed under Part 70;

NFS—West Valley—now licensed under Part 50;

AGNS—Barnwell, S.C.—built under a Part 50 Construction Permit authorization as a reprocessing plant; but no operating license issued.

In the event of an application for use of one of the above facilities as an ISFSI, a license would be issued if the facility meets the requirements of Part 72. Such licensing actions will require the preparation of an environmental impact statement or appraisal under conforming amendments of Part 51. In this regard see § 51.5(a)(10) for issuance of an initial license for storage of spent fuel in an ISFSI at a site not occupied by a nuclear power reactor; § 51.5(b)(4) for issuance of certain amendments to a

<sup>3</sup> Final Generic Environmental Impact Statement on Handling and Storage of Spent Light Water Reactor Fuel, August 1979.

## PART 72 • STATEMENTS OF CONSIDERATION

license for storage of spent fuel in an ISFSI; § 51.5(b)(5) for issuance of a renewal license for storage of spent fuel in an ISFSI; and § 51.5(b)(9) for issuance of an initial license for storage of spent fuel in an ISFSI on the site of a nuclear power reactor. These environmental impact assessments will include an evaluation of feasible alternatives. However, since the site selection process for an existing facility has already been completed, no comparative review of alternative sites will be required unless there is new information which could alter the original site evaluation findings. In practice, this means that alternative sites need not be reviewed and that the existing facility would be rejected for siting considerations only if the site involved found to be unsuitable with respect to either safety or environmental impact considerations.

An application for renewal of the license for the G.E.—Morris facility under 10 CFR Part 70 was received on February 27, 1979 and has been under review since that time. As 10 CFR Part 72 has become effective prior to completion of this licensing action, such licensing action will proceed pursuant to 10 CFR Part 72 which is specifically designed to cover spent fuel storage in an ISFSI. This is expected to result in some procedural delays in the G.E.—Morris proceedings.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following new Part 72 and related conforming amendments of Parts 51, 70, 73 and 150 to Chapter I of Title 10, of the Code of Federal Regulations are published as a document subject to codification.





## PART 73 • STATEMENTS OF CONSIDERATION

45 FR 72108  
Published 10/31/80  
Effective 10/31/80

### 10 CFR Part 73

#### Physical Protection of Plants and Materials Requirements for the Physical Protection of Nuclear Power Plants

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The U.S. Nuclear Regulatory Commission is extending from November 1, 1980 to December 1, 1980 its current relief from pat-down searches of regular employees at nuclear power reactors in order to allow time for the Commission to consider revisions to its rules in 10 CFR § 73.55 intended to finalize requirements for entry searches at such facilities.

**EFFECTIVE DATE:** October 31, 1980.

**FOR FURTHER INFORMATION CONTACT:**

L. J. Evans, Jr., Chief, Regulatory Improvements Branch, Division of Safeguards, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. (301) 427-4181.

**SUPPLEMENTARY INFORMATION:** On July 31, 1979, the Commission changed the date from August 1, 1979, to November 1, 1979, when pat-down searches of regular employees of nuclear power plant licensees had to be implemented. The rationale for this extension was provided in the **Federal Register** notice on this subject. 44 FR 47758, August 15, 1979. The Commission further extended the implementation date to November 1, 1980. The rationale for that extension is contained in 44 FR 65969.

The Commission is presently considering issuing proposed revisions to 10 CFR § 73.55(d)(1) to finalize requirements for personnel searches at protected area portals of power reactors. The *thirty day* extension of the relief from physical pat-down searches of regular employees contained herein is intended to allow sufficient time for Commission consideration of the proposed revisions. Because this rule delays a requirement, and merely continues a temporary situation for a limited period of time, the Commission finds that notice and public procedure are unnecessary and that the change can be made immediate effective without the customary 30 days period of notice required by 5 U.S.C. 553.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy

Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following Amendment to Title 10 Chapter 1, Code of Federal Regulations, Part 73 is published as a document subject to codification.

➤ 45 FR 74693

Published 11/12/80  
Effective 11/28/80

*Licensing Requirements for the Storage of Spent Fuel in an Independent Fuel Spent Storage Installation*

See Part 72 Statements of Consideration



## PART 75 • STATEMENTS OF CONSIDERATION

efficiency of administering the regulations.

### Discussion of Other Comments

In addition to the matters referred to above, the Commission has considered carefully all the issues identified in the comments received. Some of these, although not resulting in changes to the proposed rule, merit additional discussion, as follows:

**Comment:** Licensees should not be required to maintain two documents pertaining to material accounting and control, one for domestic purposes and one for IAEA purposes.

**Response:** As reflected in the final rule, NRC recognizes the desirability of reconciling the requirements of 10 CFR Parts 70 and 75 insofar as practicable. To the extent that duplication can be eliminated, we shall continue to make every effort to do so. Suggestions from licensees, drawn from their actual experience, will be welcome at any time.

**Comment:** Schedules for implementation of the Agreement do not allow sufficient time for licensees to make necessary preparations.

**Response:** The regulations, especially as revised, provide as much time as is

permitted under the applicable provisions of the Agreement and Subsidiary Arrangements. Licensees are encouraged to make advance preparations so that installation information can be submitted promptly when requested by the Commission and so that applicable procedures, including initial inventory reporting, can be implemented in a timely fashion.

**Comment:** Experimental and research facilities should not be designated for the application of IAEA safeguards.

**Response:** Such facilities are within the scope of the Agreement. So long as selections are made in conformity with the Agreement and Subsidiary Arrangements, the Commission would have no occasion to urge any particular course of action upon the IAEA. In any event, the question cannot be dealt with in the context of the present rulemaking action.

**Comment:** NRC should provide, in the rule, more specific guidance regarding the information that must be submitted as installation information and as routine reports.

**Response:** Detailed guidance has been prepared by the NRC staff and is now available. This guidance includes various new or revised forms, together with instructions for their preparation. These are being submitted to the General Accounting Office for clearance pursuant to 44 U.S.C. 3512. GAO will publish notice of submission, at which time affected persons will have the

opportunity to comment. Written data, views, or arguments regarding the forms and instructions may also be submitted directly to the Commission. Submissions made within 21 days after GAO's publication, in the Federal Register, of a notice of receipt of NRC's report proposals will be considered by the Commission before the forms are placed into use.

**Comment:** The regulations should indicate that the licensee need not include information beyond what is necessary for the Agency to make knowledgeable determinations.

**Response:** The proposed language fails to express affirmatively, as it should, just what a licensee must do. The formulation in § 75.11(d)—that the information shall be sufficiently detailed to enable knowledgeable determinations to be made in the development of Facility Attachments—is preferable.

**Comment:** The requirement that licensees submit a description of proposed procedures (as opposed to existing systems) is nebulous, may be applied unduly broadly, and is unnecessary in view of after-the-fact reports of changes in the safeguards system.

**Response:** The language in question (§ 75.11(b)(4)) implements Article 43(d) of the Agreement and accordingly has not been changed. However, as the forms supplied under § 75.11(d) will make clear, the licensee will not be called upon to propose any new procedures for purposes of compliance with the provisions of Part 75. The "proposed procedures" which must be described are those which the licensee intends to institute, for other reasons, but which are not yet in effect. (Our prior comments on this subject are withdrawn, to the extent they are inconsistent with this statement.) The details of the procedures, as opposed to a description thereof, would be required only when necessary for knowledgeable determinations to be made in the development of Facility Attachments.

**Comment:** The regulations should provide for defining in the Facility Attachment the categories of information that will be treated as being particularly sensitive.

**Response:** The commenter's concern relates to the avoidance of inadvertent loss of the protection contemplated by § 75.12(b)(1). The suggested amendment would be inappropriate, however, because the determination of particular sensitivity is to be made by the Commission; it is not a subject to be covered in the Facility Attachment. Indeed, the information in question most likely would be supplied to the IAEA before the Facility Attachment even has been prepared. To minimize the risk that

available protection is lost through inadvertence, the forms supplied by the Commission (§ 75.11(d)), or the accompanying letter of transmittal, will call attention to the provisions of § 75.12. This may be done by reference to that section, by reciting it, or by including appropriate questions reflecting its terms.

**Comment:** Licensees should not be required to provide access to IAEA inspectors, under § 75.42, except "during normal working hours."

**Response:** To limit inspections to "normal working hours" could seriously interfere with the IAEA's ability to carry out its responsibilities. "During normal working hours" seems appropriate for visits under § 75.13 to verify installation information. However, the IAEA's safeguards regime cannot be effective if inspections outside of normal working hours are subject to restraints. In view of the relevant provisions of the Agreement (e.g., Article 9 (c)(i)), the scheduling of inspections, in practice, probably will not result in serious inconvenience to the licensee.

**Comment:** The rule should state that IAEA equipment will not be agreed to

by the United States if it impinges upon certain specified interests of the licensee (such as safety, protection of proprietary information, and product quality).

**Response:** The recommended criteria are not included in the rule because they will not be utilized in precisely the terms proposed. They are relevant, however, in determining whether or not, for example, the safeguards "avoid undue interference . . . in the operation of the facilities," the information to be provided is the "minimum" required by the IAEA. The standards that will be applied are those contained in the Agreement itself, as made clear by the reference thereto in § 75.42(e)(2).

**Comment:** Advance notification should not be required, under § 75.43, with respect to routine shipments, such as those recycling uranium hexafluoride heels.

**Response:** The issue will be considered in the development of Facility Attachments. Relief may be provided, where appropriate, by granting an exemption under § 75.3(a).

### Supplemental Rules

The Commission has determined that the rules set forth in this notice will permit timely implementation of the Agreement. However, certain additional details of the process will need to be treated by the time the Agreement enters into force, or shortly thereafter. For example, IAEA representatives must be assured of access to some items of classified information; to meet this need,



## PART 75 • STATEMENTS OF CONSIDERATION

appropriate rule changes, such as amendments to 10 CFR Parts 25 and 95, may be considered. Similarly, import and export regulations will be reviewed, with a view to adopting measures which will enable IAEA inspectors to discharge their functions without impediment. Any necessary rule changes will be made in accordance with established rulemaking procedures.

### Notice

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following new Part 75 and the following amendments to Parts 40, 50, 70, 150, and 170 of Title 10, Chapter I, Code of Federal Regulations, are published as a document subject to codification.

the Application of Safeguards in the United States of America.

The Commission is amending 10 CFR Parts 70 and 75 to specify that licensees subject to 10 CFR 75.34, "Inventory change reports," are not required to provide the same information under 10 CFR 70.54, "Nuclear material transfer reports." The amendments are for purposes of clarification, as it was not intended that duplicate reports should be submitted.

Inasmuch as the amendments set forth below are of a minor and nonsubstantive nature, good cause exists for omitting notice of proposed rulemaking and public procedure thereon as unnecessary.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendments to Parts 70 and 75 of Title 10, Chapter I, Code of Federal Regulations, are published as a document subject to codification.

45 FR 73012

➤ Published 11/4/80

Effective Date: Upon the US/IAEA Safeguards Agreement's entry into force and publication of notice thereof in the Federal Register

### 10 CFR Parts 70 and 75

#### Safeguards on Nuclear Material; Implementation of US/IAEA Agreement

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Commission is amending its regulations to make it clear that licensees required to submit inventory change reports pursuant to the US/IAEA Agreement are not additionally required to submit nuclear material transfer reports under NRC domestic safeguards regulations.

**EFFECTIVE DATE:** Upon the US/IAEA Safeguards Agreement's entry into force and publication of notice thereof in the Federal Register.

**FOR FURTHER INFORMATION CONTACT:** Mr. L. C. Solem, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, DC 20555 (301-443-5903).

**SUPPLEMENTARY INFORMATION:** On July 31, 1980 the Nuclear Regulatory Commission published in the **Federal Register** (45 FR 50705) a new Part 75 to Title 10 of the Code of Federal Regulations and amendments to 10 CFR Parts 40, 50, 70, 150 and 170 to implement the Agreement Between the United States of America and the International Atomic Energy Agency for

## PART 150 • STATEMENTS OF CONSIDERATION

On February 8, 1974, the Atomic Energy Commission published in the *FEDERAL REGISTER* (38 FR 4930) proposed amendments to its regulations in 10 CFR Part 70, "Special Nuclear Material," and 10 CFR Part 150, "Exemptions and Continued Regulatory Authority in Agreement States Under Section 274," which would require reporting of theft or attempted theft of special nuclear material in the interest of the common defense and security.

Interested parties were invited to submit comments and suggestions for consideration pertaining to the proposed amendments by March 25, 1974. Upon consideration of the comments received, and other factors involved, the Commission has adopted the proposed amendments with minor editorial and clarifying changes.

These reporting requirements are being promulgated as part of an overall AEC effort to strengthen the protection of strategically important special nuclear material.

In the interest of the common defense and security, the Commission has found that good cause exists for making the amendments effective upon publication in the *FEDERAL REGISTER* without the customary 30-day notice.

Pursuant to the Atomic Energy Act of 1954, as amended, and sections 552 and 553 of Title 5 of the United States Code, the following amendments of 10 CFR Parts 70 and 150 are published as a document subject to codification.

40 FR 8774  
Published 3/3/75  
Effective 3/3/75

*Energy Reorganization Act; Revisions to Chapter 1 to Reflect Organizational and Procedural Changes*

See Part 2 Statements of Consideration.

41 FR 16445  
Published 4/19/76  
Effective 4/19/76

*Miscellaneous Changes to Chapter*

See Part 20 Statements of Consideration.

41 FR 18300  
Published 5/3/76  
Effective 6/2/76

*Preservation of Records*

See Part 20 Statements of Consideration.

42 FR 25721  
Published 5/19/77  
Effective 5/19/77

*GAO Clearances; Reporting and Record Keeping Requirements*

See Part 20 Statements of Consideration.

42 FR 33265  
Published 6/30/77  
Effective 6/30/77

*Certain Reporting Dates Changed*

See Part 30 Statements of Consideration.

42 FR 43965  
Published 9/1/77  
Effective 9/1/77

*Amendments to Chapter to Revoke or Revise Certain Reporting Requirements*

See Part 20 Statements of Consideration.

44 FR 43280  
Published 7/24/79  
Effective 11/21/79

*Safeguard Requirements for Special Nuclear Material of Moderate and Low Strategic Significance*

See Part 70 Statements of Consideration.

44 FR 50012  
Published 8/24/79  
Effective 8/24/79  
Comment Period expires 10/24/79

*Uranium Mill Tailings Licensing*

See Part 40 Statements of Consideration.

44 FR 68184  
Published 11/28/79  
Effective 3/25/80

*Physical Protection Upgrade Rule*

See Part 73 Statements of Considerations.

45 FR 12377  
Published 2/26/80  
Effective 2/26/80

*Uranium Mill Tailings Licensing*

See Part 40 Statements of Consideration.

15FR14199  
Published 3/5/80  
Effective 3/5/80

*Minor and Clarifying Amendments*

See Part 1 Statements of Consideration

45 FR 18905  
Published 3/24/80  
Effective 3/24/80

*Deletion of reference to Panama Canal Zone; Minor Amendments*

See Part 4 Statements of Consideration.

45 FR 50705  
Published 7/31/80  
Effective 7/31/80

*Safeguards on Nuclear Material-Implementation of US/IAEA Agreement*

See Part 75 Statements of Consideration.

45 FR 65521  
Published 10/3/80  
Effective 11/17/80

*Uranium Mill Licensing Requirements*

See Part 30 Statements of Consideration.

➤ 45 FR 74693  
Published 11/12/80  
Effective 11/28/80

*Licensing Requirements for the Storage of Spent Fuel in an Independent Fuel Spent Storage Installation*

See Part 72 Statements of Consideration



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UNITED STATES NUCLEAR REGULATORY COMMISSION

RULES and REGULATIONS

TITLE 10, CHAPTER 1. CODE OF FEDERAL REGULATIONS - ENERGY

SUPPLEMENT NUMBER

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DATE ISSUED:

November 17, 1980 - November 28, 1980

December 1, 1980

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UNITED STATES NUCLEAR REGULATORY COMMISSION  
**RULES and REGULATIONS**  
TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

**PART  
11**

**CRITERIA AND PROCEDURES FOR DETERMINING  
ELIGIBILITY FOR ACCESS TO OR CONTROL OVER  
SPECIAL NUCLEAR MATERIAL**

» **General Provisions**

**Sec.**

- 11.1 Purpose.
- 11.3 Scope.
- 11.5 Policy.
- 11.7 Definitions.
- 11.9 Specific exemptions.

**Requirements for Special Nuclear Material  
Access Authorization**

- 11.11 Requirements at fixed sites.
- 11.13 Requirements in transportation.
- 11.15 Application for special nuclear material access authorization.

**Criteria for Determining Eligibility for  
Access to, or Control Over, Special  
Nuclear Material**

- 11.21 Application of the criteria.

Authority: Sec. 7, Pub. L. 93-377, 88 Stat. 478; sec. 1611, Pub. L. 93-703, 88 Stat. 948 (42 U.S.C. 2201).

**General Provisions**

**§ 11.1 Purpose.**

This part establishes the requirements for special nuclear material access authorization, and the criteria and procedures for resolving questions concerning the eligibility of individuals to receive special nuclear material access authorization for conduct of certain activities, licensed or otherwise, which involve access to or control over special nuclear material.

**§ 11.3 Scope.**

- (a) The requirements, criteria, and procedures of this part apply to the establishment of and eligibility for special nuclear material access authorization for employees, contractors, consultants of, and applicants for employment with, licensees or contractors of the Nuclear Regulatory Commission where such employment, contract, service, or consultation involves any job falling within the criteria of § 11.11 or § 11.13.
- (b) The requirements, criteria, and procedures of this part are in addition to and not in lieu of any requirements,

criteria, or procedures for access to or control over classified special nuclear material.

**§ 11.5 Policy.**

It is the policy of the Nuclear Regulatory Commission to carry out its authority to establish and administer, in a manner consistent with traditional American concepts of justice, a personnel security program in the interests of the common defense and security for the purpose of safeguarding special nuclear material and preventing sabotage which would endanger the public by exposure to radiation. To this end, the Commission has established criteria for determining eligibility for special nuclear material access authorization and will afford affected individuals the opportunity for administrative review of questions concerning their eligibility for special nuclear material access authorization.

**§ 11.7 Definitions.**

As used in this part:

- (a) Terms defined in Parts 10, 25, 50, 70, 73, and 95 of this chapter have the same meaning when used in this part.
- (b) "Special nuclear material access authorization" means an administrative determination that an individual (including a contractor or consultant) who is employed by or is an applicant for employment with an affected Commission contractor, licensee of the Commission, or contractor of a licensee of the Commission may work at a job which affords access to or control over special nuclear material and that permitting the individual to work at that job would not be inimical to the common defense and security.
- (c) "NRC-'U' special nuclear material access authorization" means an administrative determination based upon a national agency check and a full-field background investigation

conducted by the Office of Personnel Management that an individual in the course of employment is eligible to work at a job falling within the criteria of § 11.11(a)(1) or § 11.13.

(d) "NRC-'R' special nuclear material access authorization" means an administrative determination based upon a national agency check that an individual in the course of employment is eligible to work at a job falling within the criterion of § 11.11(a)(2).

**§ 11.9 Specific exemptions.**

The Commission may, upon application of any interested party, grant an exemption from the requirements of this Part. Exemptions will be granted only if they are authorized by law and will not constitute an undue risk to the common defense and security. Documentation related to the request, notification and processing of an exemption shall be maintained for two years beyond the period covered by the exemption.

**Requirements for Special Nuclear  
Material Access Authorization**

**§ 11.11 Requirements at fixed sites.**

- (a) Each licensee who after February 19, 1981, uses, processes, or stores formula quantities of special nuclear material (as defined in Part 73 of this chapter) subject to the physical protection requirements of §§ 73.20, 73.45, and 73.46 of Part 73 of this chapter shall identify at his facility or plant (excluding however all non-power reactor facilities and storage of fuel) incident thereto and facilities and plants in which the licensee possesses or uses only irradiated special nuclear material subject to the exemption of § 73.6(b) of Part 73 of this chapter and describe to the Commission, by amendment to his security plan:
  - (1) All jobs in which an individual

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could steal or divert special nuclear material, or commit sabotage which would endanger the public by exposure to radiation, by working alone or in cooperation with an individual who does not possess an NRC-U special nuclear material access authorization, or by directing or coercing any individual to assist in the theft, diversion, or sabotage. Such jobs include but are not limited to:

- (i) All positions in the licensee's security force,
- (ii) Management positions with the authority to:
  - (A) Direct the actions of members of the security force or alter security procedures, or
  - (B) Direct routine movements of special nuclear material, or
  - (C) Direct the routine status of vital equipment.
- (iii) All jobs which require unescorted access within onsite alarm stations.
- (iv) All jobs which require unescorted access to special nuclear material or within vital areas.

(2) All jobs which require unescorted access within protected areas and which do not fall within the criterion of paragraph (a)(1) of this section.

(b) After 365 days following Commission approval of the amended security plan submitted in accordance with paragraph (a) of this section no individual may be permitted to work at any job determined by the Commission to fall within the criterion of paragraph (a)(1) of this section without an NRC-U special nuclear material access authorization, and no individual may be permitted unescorted access to any protected area at any site subject to this part without either an NRC-U or NRC-R special nuclear material access authorization. An exception is provided for any individual employed on the effective date of these amendments, and not yet in receipt of an approved access authorization from the Commission, provided that a complete application was submitted for that employee in accordance with § 11.15 and the application has not been disapproved.

## § 11.13 Requirements in transportation.

(a) All individuals who after November 23, 1981, transport, arrange for transport, drive motor vehicles in road shipments of special nuclear material, pilot aircraft in air shipments of special nuclear material, act as monitors at transfer points, or escort road, rail, sea, or air shipments of special nuclear material subject to the appropriate physical protection requirements of §§ 73.20, 73.25, 73.26, or 73.27 of this chapter shall have NRC-U

special nuclear material access authorization. An exception is provided for any individual employed on the effective date of these amendments, and not yet in receipt of an approved access authorization from the Commission, provided that a complete application was submitted for that employee in accordance with § 11.15 and the application has not been disapproved.

(b) Licensees who after November 23, 1981 transport or who deliver to a carrier for transport special nuclear material subject to the physical protection requirements of §§ 73.20, 73.25, 73.26, 73.27 of this chapter shall confirm and record prior to shipment the name and special nuclear material access authorization number of all drivers, escorts, and monitors assigned to the shipment. An exception to the requirement to confirm and record the SSNM access authorization number is provided for any individual employed on the effective date these amendments and not yet in receipt of an approved access authorization from the Commission, provided that a complete application was submitted for that employee in accordance with § 11.15 and the application has not been disapproved.

## § 11.15 Application for special nuclear material access authorization.

(a) Application for special nuclear material access authorization, renewal, or change in level shall be filed by the employer on behalf of the applicant with the Director, Division of Security, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.<sup>3</sup> Applications for affected individuals employed on the effective date of these amendments shall be submitted within 60 days of the effective date or within 60 days of notification of Commission approval of the amended security plan.

(b) Applications for special nuclear material access authorization shall be made on forms supplied by the Commission including:

- (1) A Personnel Security Questionnaire (PSQ) completed by the individual.
- (2) Two standard fingerprint cards with the individual's fingerprints (fingerprints may be taken by a local police authority).
- (3) Authority to release information.
- (4) Security acknowledgment form.
- (5) Other related forms where specified in accompanying NRC instructions.
- (6) A statement by the employer, prospective employer, or contractor, identifying the job to be assigned to or

assumed by the individual and the level of authorization needed, justified by appropriate reference to the licensee's security plan.

(c) Special nuclear material access authorization shall expire 5 years following the date of issue. If continued special nuclear material access authorization is required, an application for renewal shall be submitted at least 120 days prior to expiration date. Failure to make a timely application will result in expiration of special nuclear material access authorization. Special nuclear material access authorization for which a timely application for renewal has been made may be continued beyond the expiration date pending final action on the application. An application for renewal will consist of the following:

- (1) A Personnel Security Questionnaire, completed by the applicant.
- (2) Two standard fingerprint cards with the individual's fingerprints.
- (3) Authority to release information.
- (4) Other related forms where specified in accompanying NRC instructions.
- (5) A statement by the employer or contractor that at the time of application for renewal the individual's assigned or assumed job requires the level of special nuclear material access authorization which he or she holds, justified by appropriate reference to the licensee's security plan.
- (d) If at any time, due to new assignment or assumption of duties, a change in special nuclear material access authorization level from NRC "R" to "U" is required, the individual shall apply for a change of level of special nuclear material access authorization. Such an application shall include a description of the new duties to be assigned or assumed, justified by appropriate reference to the licensee's security plan.

(e) Each application for special nuclear material access authorization, renewal, or change in level shall be accompanied by the employer's remittance payable to the U.S. Nuclear Regulatory Commission according to the following schedule:

|                                                                                                           |         |
|-----------------------------------------------------------------------------------------------------------|---------|
| (1) New application, "U"                                                                                  | \$1,000 |
| (2) New application, "R"                                                                                  | 15      |
| (3) Renewal "U" or "R"                                                                                    | 15      |
| (4) Change of level "R" to "U" (full fee charged only if an investigation is required)                    | 1,000   |
| (5) Convert existing NRC or DOE "Q" or "QDQ" to U or R                                                    | (1)     |
| (6) Convert existing NRC or DOE "L" or "LDQ" to U (full fee charged only if an investigation is required) | 1,000   |
| (7) Convert existing NRC or DOE "Q", "QDQ", "L", or "LDQ" to R                                            | (1)     |

<sup>1</sup> No charge.

Material access authorization fees will

<sup>3</sup> This does not alter the requirement for methods to observe individuals within material access areas as stated in § 73.46(e)(9) of this chapter.

<sup>3</sup> Process times for special nuclear material access authorizations can be expected to be about 190 days for NRC-U and 130 days for NRC-R.

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be published in December of each year and will be applicable to each access authorization request received during the following calendar year.

Applications from individuals having current Federal access authorizations may be processed expeditiously at less cost, since the Commission may accept the investigations and reports of other Federal Government agencies which conduct personnel security investigations. The use of such investigations and reports is contingent upon their serving as the basis for a previous clearance approval.

### Criteria for Determining Eligibility for Access to or Control Over, Special Nuclear Material

#### § 11.21 Application of the criteria.

(a) The decision to grant or deny special nuclear material access authorization is a comprehensive, common-sense judgment, made after consideration of all the relevant information, favorable or unfavorable, that to grant or deny special nuclear material access authorization is or is not inimical to the common defense and security and is or is not clearly consistent with the national interest.

(b) To assist in making these determinations, on the basis of all the information in a particular case, there are set forth in § 10.11 of this chapter a number of specific types of derogatory information. These criteria are not exhaustive but contain the principal types of derogatory information which, in the opinion of the Commission create a question as to the individual's eligibility for special nuclear material access authorization. These criteria are subject to continuing review and may be revised from time to time as experience and circumstances may make desirable.

(c) When the reports of investigation of an individual contain information reasonably falling within one or more of the classes of derogatory information listed in § 10.11, it shall create a question as to the individual's eligibility for special nuclear material access authorization. In such cases, the application of the criteria shall be made in light of and with specific regard to whether the existence of such information supports a reasonable belief that the granting of a special nuclear material access authorization would be inimical to the common defense and security. The Director, Division of Security may authorize the granting of special nuclear material access authorization on the basis of the information in the case or may authorize the conduct of an interview with the individual and, on the basis of such

interview and such other investigation as he deems appropriate, may authorize the granting of special nuclear material access authorization. Otherwise, a question concerning the eligibility of an individual for special nuclear material access authorization shall be resolved in accordance with the procedures set forth in §§ 10.20 through 10.37 of this chapter.

(d) In resolving a question concerning the eligibility or continued eligibility of an individual for special nuclear material access authorization by action of the Personnel Security Board,<sup>4</sup> the following principle shall be applied by the Board: Where there are grounds sufficient to establish a reasonable belief as to the truth of the information regarded as substantially derogatory and when the existence of such information supports a reasonable belief that granting access would be inimical to the common defense and security, this shall be the basis for a recommendation for denying or revoking special nuclear material access authorization if not satisfactorily rebutted by the individual or shown to be mitigated by circumstance.

<sup>4</sup>The function of the Personnel Security Board is described in Part 10 of this chapter.



## PART 31 • PROPOSED RULE MAKING

Continental Shelf as well as the Commission's jurisdiction over persons using these materials in diving activities or on free-floating objects, such as lay barges and other vessels, in the waters above the seabed.

Finally, it should be noted that the proposed rule is focused on the Outer Continental Shelf area and not on the high seas. Thus, with respect to the high seas, NRC would continue, as has been the case historically, its licensing authority over certain kinds of persons, such as the Navy using nuclear material on naval vessels, while Agreement States would retain their authority over other kinds of persons, such as, for example, those using nuclear materials on State-chartered research vessels. In other words, the Commission acknowledges its present practice of regarding possession and use of agreement materials on the high seas by the citizens of littoral States, which have entered into agreements with the Commission pursuant to section 274b of the Atomic Energy Act, as subject to the regulatory authority assumed by such States pursuant to such agreements. However, the Commission reserves the right to alter or amend such practice at any time.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Section 553 of Title 5 of the United States Code, notice is given hereby that the adoption of the following amendments to 10 CFR Parts 31 and 150 is contemplated.

### PART 31—GENERAL DOMESTIC LICENSES FOR BY PRODUCT MATERIAL

1. Section 31.6 is amended to read:

**§ 31.6 General license to install devices generally licensed in § 31.5.**

Any person who holds a general license issued by an Agreement State authorizing the holder to manufacture, install, or service a device described in § 31.5 within such Agreement State is hereby granted a general license to install and service such device in any non-Agreement State or in offshore waters beyond Agreement States' territorial waters and within the area of the U.S. Outer Continental Shelf; Provided, That:

### PART 150—EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY IN AGREEMENT STATES AND IN OFFSHORE WATERS UNDER SECTION 274

2. The title of 10 CFR Part 150 is changed to read, "Exemptions and Continued Regulatory Authority in Agreement States and in Offshore Waters Under Section 274"

3. Section 150.1 is amended to read:

#### § 150.1 Purpose.

The regulations in this part provide certain exemptions to persons in Agreement States from the licensing requirements contained in Chapters 6, 7, and 8 of the Act and from the regulations of the Commission imposing requirements upon persons who receive, possess, use or transfer byproduct material, source or special nuclear material in quantities not sufficient to form a critical mass; and to define activities in Agreement States and in offshore waters over which the regulatory authority of the Commission continues. The provisions of the Act, and regulations of the Commission apply to all persons in Agreement States and in offshore waters engaging in activities over which the regulatory authority of the Commission continues.

4. In § 150.3, a new paragraph (f) is added as follows and former paragraph (f) and subsequent paragraphs are relettered:

#### § 150.3 Definitions.

As used in this part: \* \* \*

(f) "Offshore waters" means those waters beyond Agreement States' territorial waters and within the area of the U.S. Outer Continental Shelf.

#### § 150.5 [Amended]

5. A new heading is added after § 150.5, to read as follows:

#### Continued Commission Regulatory Authority in Offshore Waters

6. A new § 150.7 is added before the heading "EXEMPTIONS IN AGREEMENT STATES," to read as follows:

#### § 150.7 Persons in offshore waters not exempt.

Persons in offshore waters are not exempt from the Commission's licensing and regulatory requirements with respect to byproduct, source, and special nuclear materials.

7. Section 150.20(a) is amended to read:

#### § 150.20 Recognition of Agreement State licenses.

(a) Subject to the provisions of paragraph (b) of this section, any person who holds a specific license from an Agreement State where the licensee maintains an office for directing the

licensed activity, and at which radiation safety records are normally maintained, is hereby granted a general license to conduct the same activity in non-Agreement States or in offshore waters; Provided, That the specific license does not limit the activity authorized by the license to specified installations or locations.

#### § 150.20 [Amended]

8. The first paragraph of § 150.20(b) is amended to read:

(b) Notwithstanding any provision to the contrary in any specific license issued by an Agreement State to a person who engages in activities in a non-Agreement State or in offshore waters under a general license provided in this section, the general license provided in this section is subject to the provisions of §§ 30.14(d), 30.34, 30.41, and 30.51 to 30.63, inclusive, of Part 30 of this chapter; §§ 40.41, 40.51, 40.61 to 40.63 inclusive, 40.71, and 40.81 of Part 40 of this chapter; and §§ 70.32, 70.42, 70.51 to 70.56 inclusive, 70.61, 70.62, and 70.71 of Part 70 of this chapter; and to the provisions of Parts 19, 20, and 71 and Subpart B of Part 34 of this chapter. In addition any person who engages in activities in non-Agreement States or in offshore waters under a general license provided in this section:

#### § 150.20 [Amended]

9. In § 150.20(b)(1), the title of Form NRC-241 (revised) is changed to read, "Report of Proposed Activities in Non-Agreement States or in Offshore Waters".

#### § 150.20 [Amended]

10. Section 150.20(b)(2) is amended to read:

(b) \* \* \*  
(2) Shall not, in any non-Agreement State or in offshore waters, transfer or dispose of radioactive material possessed or used under the general license provided in this section except by transfer to a person (i) specifically licensed by the Commission to receive such material, or (ii) exempt from the requirements for a license for such material under § 30.14 of this chapter;



➤ 45 FR 78700  
Published 11/26/80

**10 CFR Part 31**

**NRC's Jurisdiction Over Persons Using  
Byproduct, Source and Special  
Nuclear Material in Offshore Waters  
Beyond Agreement States' Territorial  
Waters; Correction**

**AGENCY:** Nuclear Regulatory  
Commission.

**ACTION:** Proposed rule; Correction.

**SUMMARY:** In a Federal Register document published on October 30, 1980 (45 FR 71807), the NRC proposed to amend § 31.6 General license to install devices generally licensed in § 31.5. The word "general" was inadvertently used in the first line of proposed text when the word "specific" was intended. This document corrects this error and republishes the proposed text of § 31.6 as it should appear.

**FOR FURTHER INFORMATION CONTACT:** John D. Philips, Chief, Rules and Records, Office of Administration, Nuclear Regulatory Commission, Washington, DC 20555, (301) 492-7080.

**SUPPLEMENTARY INFORMATION:** The proposed revision of the introductory text of § 31.6 appearing at 45 FR 71809 (October 30, 1980) as corrected, reads as follows:

**§ 31.6 General license to install devices generally licensed in § 31.5.**

Any person who holds a specific license issued by an Agreement State authorizing the holder to manufacture, install, or service a device described in § 31.5 within such Agreement State is hereby granted a general license to install and service such device in any non-Agreement State or in offshore waters beyond Agreement States' territorial waters and within the area of the U.S. Outer Continental Shelf; Provided, that:

## PART 50 • DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

principal design criteria for water-cooled nuclear power plants similar in design and location to plants for which construction permits have previously been issued by the Commission and provides guidance to applicants for construction permits in establishing principal design criteria for other types of nuclear power units;

(ii) The design bases and the relation of the design bases to the principal design criteria;

(iii) Information relative to materials of construction, general arrangement, and approximate dimensions, sufficient to provide reasonable assurance that the final design will conform to the design bases with adequate margin for safety.

(4) A preliminary analysis and evaluation of the design and performance of structures, systems, and components of the facility with the objective of assessing the risk to public health and safety resulting from operation of the facility and including determination of (i) the margins of safety during normal operations and transient conditions anticipated during the life of the facility, and (ii) the adequacy of structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents.

**Analysis and evaluation of ECCS cooling performance following postulated loss-of-coolant accidents shall be performed in accordance with the requirements of § 50.46 for facilities for which construction permits may be issued after December 28, 1974.**

(5) An identification and justification for the selection of those variables, conditions, or other items which are determined as the result of preliminary safety analysis and evaluation to be probable subjects of technical specifications for the facility, with special attention given to those items which may significantly influence the final design: *Provided, however,* That this requirement is not applicable to an application for a construction permit filed prior to January 16, 1969.

(6) A preliminary plan for the applicant's organization, training of personnel, and conduct of operations;

(7) A description of the quality assurance program to be applied to the design, fabrication, construction, and testing of the structures, systems, and components of the facility. Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," sets forth the requirements for quality assurance programs for nuclear power plants and fuel reprocessing plants. The description of the quality assurance program for a nuclear power plant or a fuel reprocessing plant shall include a discussion of how the applicable requirements of Appendix B will be satisfied.

(8) An identification of those structures, systems or components of the facility, if any, which require research and development to confirm the adequacy of

their design; an identification and description of the research and development program which will be conducted to resolve any safety questions associated with such structures, systems or components; and a schedule of the research and development program showing that such safety questions will be resolved at or before the latest date stated in the application for completion of construction of the facility.

(9) The technical qualifications of the applicant to engage in the proposed activities in accordance with the regulations in this chapter.

(10) A discussion of the applicant's preliminary plans for coping with emergencies. Appendix E sets forth items which shall be included in these plans.

(11) On or after February 5, 1979, applicants who apply for construction permits for nuclear powerplants to be built on multiunit sites shall identify potential hazards to the structures, systems and components important to safety of operating nuclear facilities from construction activities. A discussion shall also be included of any managerial and administrative controls that will be used during construction to assure the safety of the operating unit.

(b) *Final safety analysis report.* Each application for a license to operate a facility shall include a final safety analysis report. The final safety analysis report shall include information that describes the facility, presents the design bases and the limits on its operation, and presents a safety analysis of the structures, systems, and components and of the facility as a whole, and shall include the following:

(1) All current information, such as the results of environmental and meteorological monitoring programs, which has been developed since issuance of the construction permit, relating to site evaluation factors identified in Part 100 of this chapter.

(2) A description and analysis of the structures, systems, and components of the facility, with emphasis upon performance requirements, the bases, with technical justification therefor, upon which such requirements have been established, and the evaluations required to show that safety functions will be accomplished. The description shall be sufficient to permit understanding of the system designs and their relationship to safety evaluations.

(i) For nuclear reactors, such items as the reactor core, reactor coolant system, instrumentation and control systems, electrical systems, containment system, other engineered safety features, auxiliary and emergency systems, power conversion systems, radioactive waste han-

dling systems, and fuel handling systems shall be discussed insofar as they are pertinent.

(ii) For facilities other than nuclear reactors, such items as the chemical, physical, metallurgical, or nuclear process to be performed, instrumentation and control systems, ventilation and filter systems, electrical systems, auxiliary and emergency systems, and radioactive waste handling systems shall be discussed insofar as they are pertinent.

(3) The kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in Part 20 of this chapter.

(4) A final analysis and evaluation of the design and performance of structures, systems, and components with the objective stated in paragraph (a) (4) of this section and taking into account any pertinent information developed since the submittal of the preliminary safety analysis report.

**Analysis and evaluation of ECCS cooling performance following postulated loss-of-coolant accidents shall be performed in accordance with the requirements of § 50.46 for facilities for which a license to operate may be issued after December 28, 1974.**

(5) A description and evaluation of the results of the applicant's programs, including research and development, if any, to demonstrate that any safety questions identified at the construction permit stage have been resolved.

(6) The following information concerning facility operation:

(i) The applicant's organizational structure, allocations or responsibilities and authorities, and personnel qualifications requirements.

(ii) Managerial and administrative controls to be used to assure safe operation. Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants" sets forth the requirements for such controls for nuclear power plants and fuel reprocessing plants. The information on the controls to be used for a nuclear power plant or a fuel reprocessing plant shall include a discussion of how the applicable requirements of Appendix B will be satisfied.

(iii) Plans for preoperational testing and initial operations.

(iv) Plans for conduct of normal operations, including maintenance, surveillance, and periodic testing of structures, systems, and components.

\*Deleted 41 FR 6256.

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(v) Plans for coping with emergencies, which shall include the items specified in Appendix E.

(vi) Proposed technical specifications prepared in accordance with the requirements of § 50.36.

(vii) On or after February 5, 1979, applicants who apply for operating licenses for nuclear powerplants to be operated on multiunit sites shall include an evaluation of the potential hazards to the structures, systems, and components important to safety of operating units resulting from construction activities, as well as a description of the managerial and administrative controls to be used to provide assurance that the limiting conditions for operation are not exceeded as a result of construction activities at the multiunit sites.

(7) The technical qualifications of the applicant to engage in the proposed activities in accordance with the regulations in this chapter.

(8) A description and plans for implementation of an operator requalification program. The operator requalification program shall, as a minimum, meet the requirements for those programs contained in Appendix A of Part 55 of this chapter.

(c) **Physical security plan.** Each application for a license to operate a production or utilization facility shall include a physical security plan. The plan shall consist of two parts. Part I shall address vital equipment, vital areas, and isolation zones, and shall demonstrate how the applicant plans to comply with the requirements of Part 73 (and Part 11 of this chapter, if applicable, including the identification and description of jobs as required by § 11.11(a) of Part 11, at the proposed facility). Part II shall list tests, inspections, and other means to be used to demonstrate compliance with such requirements, if applicable.

(d) **Safeguards contingency plan.** Each application for a license to operate a production or utilization facility that shall be subject to §§ 73.50, 73.55, or 73.60 of this chapter shall include a licensee safeguards contingency plan in accordance with the criteria set forth in Appendix C to 10 CFR Part 73. The safeguards contingency plan shall include plans for dealing with threats, thefts, and industrial sabotage, as defined in Part 73 of this

chapter, relating to the special nuclear material and nuclear facilities licensed under this chapter and in the applicant's possession and control. Each application for such a license shall include the first four categories of information contained in the applicant's safeguards contingency plan. (The first four categories of information, as set forth in Appendix C to 10 CFR Part 73, are Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix. The fifth category of information, Procedures, does not have to be submitted for approval.)<sup>\*</sup>

### § 50.34a Design objectives for equipment to control releases of radioactive material in effluents—nuclear power reactors.

(a) An application for a permit to construct a nuclear power reactor shall include a description of the preliminary design of equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal reactor operations, including expected operational occurrences. In the case of an application filed on or after January 2, 1971, the application shall also identify the design objectives, and the means to be employed, for keeping levels of radioactive material in effluents to unrestricted areas as low as is reasonably achievable. The term "as low as is reasonably achievable" as used in this part means as low as is reasonably achievable taking into account the state of technology, and the economics of improvements in relation to benefits to the public health and safety and other societal and socioeconomic considerations, and in relation to the utilization of atomic energy in the public interest. The guides set out in Appendix I provide numerical guidance on design objectives for light-water-cooled nuclear power reactors to meet the requirement that radioactive material in effluents released to unrestricted areas be kept as low as is reasonably achievable. These numerical guides for design objectives and limiting conditions for operation are not to be construed as radiation protection standards.

(b) Each application for a permit to construct a nuclear power reactor shall include:

(1) A description of the preliminary design of equipment to be installed pursuant to paragraph (a) of this section;

(2) An estimate of:

(i) The quantity of each of the principal radio-nuclides expected to be released annually to unrestricted areas in liquid effluents produced during normal reactor operations; and

(ii) The quantity of each of the principal radio-nuclides of the gases, halides, and particulates expected to be released annually to unrestricted areas in gaseous effluents produced during normal reactor operations.

(3) A general description of the provisions for packaging, storage, and shipment offsite of solid waste containing radioactive materials resulting from treatment of gaseous and liquid effluents and from other sources.

(c) Each application for a license to operate a nuclear power reactor shall include (1) a description of the equipment and procedures for the control of gaseous and liquid effluents and for the maintenance and use of equipment installed in radioactive waste systems, pursuant to paragraph (a) of this section; and (2) a revised estimate of the information required in paragraph (b)(2) of this section if the expected releases and exposures differ significantly from the estimates submitted in the application for a construction permit.

### § 50.35 Issuance of construction permits.<sup>1</sup>

(a) When an applicant has not supplied initially all of the technical information required to complete the application and support the issuance of a construction permit which approves all proposed design features, the Commission may issue a construction permit if the Commission finds that (1) the applicant has described the proposed design of the facility, including, but not limited to, the principal architectural and engineering criteria for the design, and has identified the major features or components incorporated therein for the protection of the health and safety of the public; (2) such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report; (3) safety features or components, if any, which require research and development have been described by the applicant and the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components; and that (4) on the basis of the foregoing, there is reasonable assurance that, (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility, and (ii) taking into consideration the site criteria contained in Part 100 of this chapter, the proposed facility can be constructed and operated

<sup>\*</sup>Regulatory Guide 1.17 dated June 1973 describes physical security criteria generally acceptable for the protection of nuclear power reactors against acts of industrial sabotage.

<sup>1</sup>A physical security plan that contains all the information required in both § 73.55 and Appendix C to Part 73 satisfies the requirement for a contingency plan.

<sup>1</sup>The Commission may issue a provisional construction permit pursuant to the regulations in this part in effect on March 30, 1970, for any facility for which a notice of hearing on an application for a provisional construction permit has been published on or before that date.

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conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gas-cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway shall focus on such actions as are appropriate to protect the food ingestion pathway.

### § 50.48 Fire protection schedules.

To the extent that any facility's license conditions or technical specifications incorporate compliance dates for modifications necessary to provide fire protection features proposed by a licensee and accepted by the NRC staff as satisfying the provisions of Appendix A to Branch Technical Position BTP/APCSB 9.5-1 and reflected in NRC staff Fire Protection Safety Evaluation Reports issued prior to the effective date of this rule, those dates are hereby suspended pending further action by the Commission.

### § 50.48 Fire Protection.

(a) Each operating nuclear power plant shall have a fire protection plan that satisfies Criterion 3 of Appendix A to this part. This fire protection plan shall describe the overall fire protection program for the facility, identify the various positions within the licensee's organization that are responsible for the program, state the authorities that are delegated to each of these positions to implement those responsibilities, and outline the plans for fire protection, fire detection and suppression capability, and limitation of fire damage. The plan shall also describe specific features necessary to implement the program described above, such as administrative controls and personnel requirements for fire prevention and manual fire suppression activities, automatic and manually operated fire detection and suppression systems, and the means to limit fire damage to structures, systems, or components important to safety so that the capability to safely shut down the plant is ensured.<sup>3</sup>

<sup>3</sup> Basic fire protection guidance for nuclear power plants is contained in two NRC documents:

- Branch Technical Position Auxiliary Power Conversion System Branch BTP/APCSB 9.5-1, "Guidelines for Fire Protection for Nuclear Power Plants," for new plants docketed after July 1, 1976, dated May 1976.
- Appendix A to BTP/APCSB 9.5-1, "Guidelines for Fire Protection for Nuclear Power Plants Docketed Prior to July 1, 1976," for plants that were operating or under various stages of design or construction before July 1, 1976, dated August 23, 1976.

Also see Note 4.

(b) Appendix R to this part establishes fire protection features required to satisfy Criterion 3 of Appendix A to this part with respect to certain generic issues for nuclear power plants licensed to operate prior to January 1, 1979. Except for the requirements of Sections III.G, III.J, and III.O, the provisions of Appendix R to this part shall not be applicable to nuclear power plants licensed to operate prior to January 1, 1979, to the extent that fire protection features proposed or implemented by

the licensee have been accepted by the NRC staff as satisfying the provisions of Appendix A to Branch Technical Position BTP/APCSB 9.5-1<sup>4</sup> reflected in staff fire protection safety evaluation reports issued prior to the effective date of this rule, or to the extent that fire protection features were accepted by the staff in comprehensive fire protection safety evaluation reports issued before Appendix A to Branch Technical Position BTP/APCSB 9.5-1 was published in August 1976. With respect to all other fire protection features covered by Appendix R, all nuclear power plants licensed to operate prior to January 1, 1979 shall satisfy the applicable requirements of Appendix R to this part, including specifically the requirements of Sections III.G, III.J, and III.O.

(c) All fire protection modifications require to satisfy the provisions of Appendix R to this part or directly affected by such requirements shall be completed on the following schedule:

(1) Those fire protection features that involve revisions of administrative controls, manpower changes, and training, shall be implemented within 30 days after the effective date of this section and Appendix R to this part.

(2) Those fire protection features that involve installation of modifications that do not require prior NRC approval or plant shutdown shall be implemented within 9 months after the effective date of this section and Appendix R to this part.

<sup>4</sup> Clarification and guidance with respect to permissible alternatives to satisfy Appendix A to BTP/APCSB 9.5-1 has been provided in four other NRC documents.

- "Supplementary Guidance on Information Needed for Fire Protection Evaluation," dated October 21, 1976.
- "Sample Technical Specification," dated May 12, 1977.
- "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Control and Quality Assurance," dated June 14, 1977.
- "Manpower Requirements for Operating Reactors," dated May 11, 1978.

A Fire Protection Safety Evaluation Report that has been issued for each operating plant states how these guidelines were applied to each facility and identifies open fire protection issues that will be resolved when the facility satisfies the appropriate requirements of Appendix R to this part.

(3) Those fire protection features, except for those requiring prior NRC approval by paragraph (c)(5) of this section, that involve installation of modifications that do require plant shutdown, the need for which is justified in the plans and schedules required by the provisions of paragraph (c)(5) of this section, shall be implemented before startup after the earliest of the following events commencing 180 days or more after the effective date of this section and Appendix R to this part:

- (i) the first refueling outage;
- (ii) another planned outage that lasts for at least 60 days; or
- (iii) an unplanned outage that lasts for at least 120 days.

(4) Those fire protection features that require prior NRC approval by paragraph (c)(5) of this section, shall be implemented within the following schedule: Dedicated shutdown systems—30 months after NRC approval; modifications requiring plant shutdown—before startup after the earliest of the events given in paragraph (c)(3) commencing 180 days after NRC approval; modifications not requiring plant shutdown—6 months after NRC approval.

(5) Licensees shall make any modifications necessary to comply with these requirements in accordance with the above schedule without prior review and approval by NRC except for modifications required by Section III.G.3 of Appendix R to this part. Licensees shall submit plans and schedules for meeting the provisions of paragraphs (c)(2), (c)(3), and (c)(4) within 30 days after the effective date of this section and Appendix R to this part. Licensees shall submit design descriptions of modifications needed to satisfy Section III.G.3 of Appendix R to this part within 30 days after the the effective date of this section and Appendix R to this part.

(6) In the event that a request for exemption from a requirement to comply with one or more of the provisions of Appendix R filed within 30 days of the effective date of this rule is based on an assertion by the licensee that such required modifications would not enhance fire protection safety in the facility or that such modifications may be detrimental to overall facility safety, the schedule requirements of paragraph (c) shall be tolled until final Commission action on the exemption request upon a determination by the Director of Nuclear Reactor Regulation that the licensee has provided a sound technical basis for such assertion that warrants further staff review of the request.

(d) Fire protection features accepted by the NRC staff in Fire Protection Safety Evaluation Reports referred to in paragraph (b) of this section and supplements to such reports, other than



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features covered by paragraph (c), shall be completed as soon as practicable but no later than the completion date currently specified in license conditions or technical specifications for such facility, or the date determined by paragraphs (d)(1) through (d)(4) of this section, whichever is sooner, unless the Director of Nuclear Reactor Regulation determines, upon a showing by the licensee, that there is good cause for extending such date and that the public health and safety is not adversely affected by such extension. Extensions of such date shall not exceed the dates determined by paragraphs (c)(1) through (c)(4) of this section.

(1) Those fire protection features that involve revisions of administrative controls, manpower changes, and training shall be implemented within 4 months after the date of the NRC staff Fire Protection Evaluation Report accepting or requiring such features.

(2) Those fire protection features involving installation of modifications not requiring prior approval or plant shutdown shall be implemented within 12 months after the date of the NRC staff Fire Protection Safety Evaluation Report accepting or requiring such features.

(3) Those fire protection features, including alternative shutdown capability, involving installation of modifications requiring plant shutdown shall be implemented before the startup after the earliest of the following events commencing 9 months or more after the date of the NRC staff Fire Protection Safety Evaluation Report accepting or requiring such features:

- (i) The first refueling outage;
- (ii) Another planned outage that lasts for at least 60 days; or
- (iii) An unplanned outage that lasts for at least 120 days.

(4) Those fire protection features involving dedicated shutdown capability requiring new buildings and systems shall be implemented within 30 months of NRC approval. Other modifications requiring NRC approval prior to installation shall be implemented within 6 months after NRC approval.

(e) Nuclear power plants licensed to operate after January 1, 1979, shall complete all fire protection modifications needed to satisfy Criterion 3 of Appendix A to this part in accordance with the provisions of their licenses.

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### § 50.52 Combining licenses.

The Commission may combine in a single license the activities of an applicant which would otherwise be licensed severally.

### § 50.53 Jurisdictional limitations.

No license under this part shall be deemed to have been issued for activities which are not under or within the jurisdiction of the United States.†

### § 50.54 Conditions of licenses.

Whether stated therein or not, the following shall be deemed conditions in every license issued:

(a) [Deleted 32 FR 2562.]

(b) No right to the special nuclear material shall be conferred by the license except as may be defined by the license.

(c) Neither the license, nor any right thereunder, nor any right to utilize or produce special nuclear material shall be transferred, assigned, or disposed of in any manner, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission shall, after securing full information, find that the transfer is in accordance with the provisions of the act and give its consent in writing.

(d) The license shall be subject to suspension and to the rights of recapture of the material or control of the facility reserved to the Commission under section 108 of the act in a state of war or national emergency declared by Congress.

(e) The license shall be subject to revocation, suspension, modification, or amendment for cause as provided in the act and regulations, in accordance with the procedures provided by the act and regulations.

(f) The licensee will at any time before expiration of the license, upon request of the Commission submit written statements, signed under oath or affirmation, to enable the Commission to determine whether or not the license should be modified, suspended or revoked.

(g) The issuance or existence of the license shall not be deemed to waive, or relieve the licensee from compliance with, the antitrust laws, as specified in subsection 105a of the act. In the event that the licensee should be found by a court of competent jurisdiction to have violated any provision of such antitrust laws in the conduct of the licensed activity, the Commission may suspend or revoke the license or take such other action with respect to it as shall be deemed necessary.

(h) The license shall be subject to the provisions of the act now or hereafter in effect and to all rules, regulations, and orders of the Commission. The terms and conditions of the license shall be subject to amendment, revision, or modification, by reason of amendments of the act or by reason of rules, regulations,

and orders issued in accordance with the terms of the act.

(i) Except as provided in § 55.9 of this chapter, the licensee shall not permit the manipulation of the controls of any facility by anyone who is not a licensed operator or senior operator as provided in Part 55 of this chapter.

(i-1) Within three (3) months after issuance of an operating license, the licensee shall have in effect an operator requalification program which shall, as a minimum, meet the requirements of Appendix A of Part 55 of this Chapter. Notwithstanding the provisions of § 50.59 the licensee shall not, except as specifically authorized by the Commission, make a change in an approved operator requalification program by which the scope, time allotted for the program or frequency in conducting different parts of the program is decreased.

Holders of operating licenses in effect on September 17, 1973 shall implement an operator requalification program which, as a minimum, meets the requirements of Appendix A of Part 55 of this chapter which was submitted for approval by the Atomic Energy Commission.

(j) Apparatus and mechanisms other than controls, the operation of which may affect the reactivity or power level of a reactor shall be manipulated only with the knowledge and consent of an operator or senior operator licensed pursuant to Part 55 of this chapter present at the controls.

(k) An operator or senior operator licensed pursuant to Part 55 of this chapter shall be present at the controls at all times during the operation of the facility.

(l) The licensee shall designate individuals to be responsible for directing the licensed activities of licensed operators. These individuals shall be licensed as senior operators pursuant to Part 55 of this chapter.

(m) A senior operator licensed pursuant to Part 55 of this chapter shall be present at the facility or readily available on call at all times during its operation, and shall be present at the facility during initial start-up and approach to power, recovery from an unplanned or unscheduled shut-down or significant reduction in power, and refueling, or as otherwise prescribed in the facility license.

\*\*\* (n) The licensee shall not, except as authorized pursuant to a construction permit, make any alteration in the facility constituting a change from the technical specifications previously incorporated in a license or construction permit pursuant to § 50.36.

(o) Primary reactor containments for water cooled power reactors shall be subject to the requirements set forth in Appendix J.

### ISSUANCE, LIMITATIONS, AND CONDITIONS OF LICENSES AND CONSTRUCTION PERMITS

#### § 50.50 Issuance of licenses and construction permits.

Upon determination that an application for a license meets the standards and requirements of the act and regulations, and that notifications, if any, to other agencies or bodies have been duly made, the Commission will issue a license, or if appropriate a construction permit, in such form and containing such conditions and limitations including technical specifications, as it deems appropriate and necessary.

#### § 50.51 Duration of license, renewal.

Each license will be issued for a fixed period of time to be specified in the license but in no case to exceed 40 years from the date of issuance. Where the operation of a facility is involved the Commission will issue the license for the term requested by the applicant or for the estimated useful life of the facility if the Commission determines that the estimated useful life is less than the term requested. Where construction of a facility is involved, the Commission may specify in the construction permit the period for which the license will be issued if approved pursuant to § 50.56. Licenses may be renewed by the Commission upon the expiration of the period.

† Amended 43 FR 6915.

\*\* Amended 38 FR 26354.  
\*\*\* Revised 31 FR 3668.

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(p) The licensee shall prepare and maintain safeguards contingency plan Procedures in accordance with Appendix C of 10 CFR Part 73 for effecting the actions and decisions contained in the Responsibility Matrix of the safeguards contingency plan. The licensee may make no change which would decrease the effectiveness of a security plan prepared pursuant to § 50.34(c) or Part 73 of this chapter, or of the first four categories of information (Background, Generic Planning Base, Licensee Planning Base, Responsibility Matrix) contained in a licensee safeguards contingency plan prepared pursuant to § 50.34(d) or Part 73, as applicable, without prior approval of the Commission. A licensee desiring to make such a change shall submit an application for an amendment to his license pursuant to § 50.90. The licensee may make changes to the security plan or to the safeguards contingency plan without prior Commission approval if the changes do not decrease the safeguards effectiveness of the plan. The licensee shall maintain records of changes to the plans made without prior Commission approval for a period of two years from the date of the change, and shall furnish to the Director of Nuclear Material Safety and Safeguards (for enrichment and reprocessing facilities) or to the Director of Nuclear Reactor Regulation (for nuclear reactors), U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the appropriate NRC Regional Office specified in Appendix A of Part 73 of this chapter, a report containing a description of each change within two months after the change is made. Prior to the safeguards contingency plan being put into effect, the licensee shall have:

- (1) All safeguards capabilities specified in the safeguards contingency plan available and functional,
- (2) Detailed Procedures developed according to Appendix C to Part 73 available at the licensee's site, and
- (3) All appropriate personnel trained to respond to safeguards incidents as outlined in the plan and specified in the detailed Procedures.

The licensee shall provide for the development, revision, implementation, and maintenance of his safeguards contingency plan. To this end, the licensee shall provide for a review at least every 12 months of the safeguards contingency plan by individuals independent of both security program management and personnel who have direct responsibility for implementation of the security program. The review shall include a review and audit of safeguards contingency procedures and practices, an audit of the security system testing and maintenance program, and a test of the safeguards system along with commitments established for response by local law enforcement authorities. The results of the review and audit, along with recommendations for improvements, shall be documented, reported to the licensee's

corporate and plant management, and kept available at the plant for inspection for a period of two years.

(q) A licensee authorized to possess and/or operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in § 50.47(b) and the requirements in Appendix E of this Part. A licensee authorized to possess and/or operate a research reactor or a fuel facility shall follow and maintain in effect emergency plans which meet the requirements in Appendix E of this Part. The nuclear power reactor licensee may make changes to these plans without Commission approval only if such changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of § 50.47(b) and the requirements of Appendix E of this Part. The research reactor licensee and/or the fuel facility licensee may make changes to these plans without Commission approval only if such changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the requirements of Appendix E of this Part. Proposed changes that decrease the effectiveness of the approved emergency plans shall not be implemented without application to and approval by the Commission. The licensee shall furnish 3 copies of each proposed change for approval; and/or if a change is made without prior approval, 3 copies shall be submitted within 30 days after the change is made or proposed to the Director of the appropriate NRC regional office specified in Appendix D, 10 CFR Part 20, with 10 copies to the Director of Nuclear Reactor Regulation, or, if appropriate, the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

(r) Each licensee who is authorized to possess and/or operate a research or test reactor facility with an authorized power level greater than or equal to 500 kW thermal, under a license of the type specified in § 50.21(c), shall submit emergency plans complying with 10 CFR Part 50, Appendix E, to the Director of Nuclear Reactor Regulation for approval within one year from the effective date of this rule. Each licensee who is authorized to possess and/or operate a research reactor facility with an authorized power level less than 500 kW thermal, under a license of the type specified in § 50.21(c), shall submit emergency plans complying with 10 CFR Part 50, Appendix E, to the Director of Nuclear Reactor Regulation for approval within two years from the effective date of this amendment.

(s)(1) Each licensee who is authorized to possess and/or operate a nuclear power reactor shall submit to NRC within 60 days of the effective date of this amendment the radiological emergency response plans of State and local governmental entities in the United States that are wholly or partially within a plume exposure pathway EPZ, as well as the plans of State governments wholly or partially within an ingestion pathway EPZ.<sup>1,2</sup> Ten (10) copies of the above plans shall be forwarded to the Director of Nuclear Reactor Regulation with 3 copies to the Director of the appropriate NRC regional office. Generally, the plume exposure pathway EPZ for nuclear power reactors shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 km) in radius. The exact size and configuration of the EPZs for a particular nuclear power reactor shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gas-cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway EPZ shall focus on such actions as are appropriate to protect the food ingestion pathway.

(2) For operating power reactors, the licensee, State, and local emergency response plans shall be implemented by April 1, 1981, except as provided in Section IV.D.3 of Appendix E of this Part. If after April 1, 1981, the NRC finds that the state of emergency preparedness does not provide reasonable assurance that appropriate protective measures can and will be taken in the event of a radiological emergency and if the deficiencies are not corrected within four months of that finding, the Commission will determine whether the reactor shall be shut down until such deficiencies are remedied or whether other enforcement action is appropriate. In determining whether a shutdown or other enforcement action is appropriate, the Commission shall take into account, among other factors, whether the licensee can demonstrate to the Commission's satisfaction that the deficiencies in the plan are not

<sup>1</sup>Emergency Planning Zones (EPZs) are discussed in NUREG-0396; EPA 320/1-78-016, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants," December 1978.

<sup>2</sup>If the State and local emergency response plans have been previously provided to the NRC for inclusion in the facility docket, the applicant need only provide the appropriate reference to meet this requirement.

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ing water intake structure location, design, construction, and capacity, nor alternative pollutant discharge systems will be considered by the Commission pursuant to NEPA (i) if a permit has been received for the facility or activity pursuant to section 402 of the FWPCA and a detailed statement with respect to issuance of that permit has been prepared pursuant to section 102(2)(C) of NEPA, or (ii) if and to the extent that conditions imposed as a part of the license or permit for the facility or activity pursuant to section 401(d) of the FWPCA require that a particular alternative be adopted, or (iii) if and to the extent that a permit or determination with a condition requiring the adoption of a particular alternative has been issued for the facility or activity pursuant to sections 208(b)(2)(C)(ii) and 303(e)(3)(B), 318, 402 or 404 of the FWPCA.

b. Alternative pollutant discharge systems will not be considered by the Commission pursuant to NEPA where effluent limitations have been imposed on the facility or activity under sections 301(c) or 302 of the FWPCA.

c. Neither alternative sites, facilities, or activities, nor alternative systems will be considered by the Commission pursuant to NEPA if and to the extent that a determination made with respect to the facility or activity under sections 208(b)(2)(C)(ii) and 303(e)(3)(B) of the FWPCA requires as a condition that a particular site, facility, or activity, or system be adopted.

d. To the maximum extent practicable any alternatives considered by the Commission pursuant to NEPA shall be considered by following procedures similar to those described in paragraph 5.

5. *Cost-benefit balances.* a. Except as provided in paragraphs b. and c., if and to the extent that there are applicable limitations or other requirements promulgated or imposed pursuant to the FWPCA, in considering the costs and benefits of a proposed action pursuant to NEPA, the Commission will determine whether the facility or activity that is the subject of the licensing action will comply with such limitations or other requirements.

(1) If it is determined that the facility or activity, or any part thereof, will not comply with such limitations or other requirements, then the facility or activity, or particular part in question, shall not be approved in the AEC license or permit.

(2) If it is determined that the facility or activity will comply with such limitations or other requirements, then the Commission will evaluate environmental impact on the basis of discharges or other activities associated with the facility or activity to be licensed which are at the level of such limitations or other requirements.

In making a determination in regard to compliance, as provided hereinabove, AEC will give due regard to the views on this matter of the Environmental Protection Agency and, where appropriate, of cognizant State and interstate agencies which exercise authority derived from the FWPCA.

b. Where limitations or other requirements of State law under authority preserved by section 510 of the FWPCA are imposed and set forth in a certification under section 401(d) of the FWPCA or are imposed and set forth as a condition in a permit issued pursuant to section 402 of the FWPCA, the Commission will, in considering costs and benefits of a proposed action pursuant to NEPA, evaluate environmental impact on the basis of discharges or other activities associated with the facility or activity which are in compliance with said limitations or other requirements. In considering the costs and benefits of a proposed action pursuant to NEPA the Commission will accord due consideration to the fact that the facility or activity, or part thereof, will meet limitations or other requirements more stringent than such limitations or other requirements

of State law by evaluating and giving consideration to environmental impact of the facility or activity accordingly.

c. (1) The Commission will not determine whether applicable limitations or other requirements promulgated or imposed pursuant to the FWPCA will be complied with if and to the extent that such a determination has been made (i) under sections 208(b)(2)(C)(ii) and 303(e)(3)(B), or (ii) sections 301(c), 302, 318, 401, or 402, or (iii) section 404 of the FWPCA. In such cases, the Commission will accept the determination made under these provisions. *Provided, however,* That the Commission will determine whether applicable limitations or other requirements promulgated or imposed pursuant to the FWPCA will be complied with notwithstanding that a determination has been made under section 401 of the FWPCA where there is not an applicable limitation under sections 301(b) and 302 of the FWPCA and there is not an applicable standard under sections 306 and 307 of the FWPCA.

6. *Effect on Appendix D.* To the extent that there is a conflict between any of the provisions of this interim statement of policy and the provisions of 10 CFR Part 50, Appendix D, the provisions of this statement shall govern.

Published January 29, 1973

### PROTECTION AGAINST ACCIDENTS IN NUCLEAR POWER REACTORS

#### Interim General Statement of Policy

A paramount objective of the Atomic Energy Commission in regulating the design, construction and operation of nuclear power plants is the protection of the public health and safety. Although the operation of nuclear power plants is not completely risk-free, the safety objective of the AEC is and always has been to assure that the risk from normal operation and postulated accidents is maintained at an acceptably low level and to assure that the likelihood of more severe accidents is extremely small.

The Commission's safety regulations set forth a comprehensive three-level approach to meet this objective. First, nuclear power plants are required to be designed and constructed with a high degree of reliability so that failures or malfunctions that could lead to accidents are highly improbable. An essential part of this first level of safety is the requirement for a comprehensive quality assurance program for plant design, construction, and operation. The second level of safety is the required provision for measures to forestall or cope with incidents and malfunctions that could occur notwithstanding the assurance offered by careful plant design, construction, and operation. For example, plants are required to be equipped with reactor protection systems to terminate the nuclear chain reaction quickly and reliably if plant conditions should require such action, and provision is made for leak detection systems to provide indication of incipient fuel cladding failures or degradation of the reactor coolant system pressure boundary well before leaks become safety problems.

The third level of safety is unique to nuclear power plants. A series of highly unlikely major failures of plant components is postulated as a set of design basis accidents, and safety systems are required to be installed to control all such postulated events. An example of such a postulated failure is the loss-of-coolant accident used as a design basis for light water power reactors; emergency core cooling systems, whose requirements were recently strengthened in revised regulations (39 FR 1001, January 4, 1974), and containment are provided to mitigate the consequences of such accidents. The Commission's regulations in 10 CFR Parts 50, "Licensing of Production and Utilization Facilities", and 100, "Reactor Site Criteria", are complementary elements of this third level of safety. Part 100 requires, in effect, that stationary nuclear power reactors be so designed that no design basis accident will result in calculated offsite doses exceeding specified guideline values. These guideline values are well below levels at which serious injury or death would be expected to occur.

A comprehensive evaluation of the level of risk associated with postulated accidents in large stationary light water nuclear power reactors has been underway on behalf of the AEC under the di-



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rection of Professor Norman Rasmussen, professor of nuclear engineering at the Massachusetts Institute of Technology. This study, entitled "An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants", WASH-1400, has been released in draft form for comment by interested persons. The draft study is the result of over two years of effort by a large multi-disciplinary team of experts, and promises to provide the most definitive evaluation to date of the risks due to many unlikely accidents in large light water power reactors. The study will be issued in final form after evaluation of the comments received on the draft study.

This draft study deserves the most careful consideration by all individuals, both inside and outside the Commission, who have an interest in nuclear power reactor safety. The study when completed will be the subject of thorough evaluation by the Commission, the Independent Advisory Committee on Reactor Safeguards, and the Commission's staff with respect to both the basic question whether the risks portrayed by the study are acceptable from the standpoint of the Commission's statutory responsibility to protect the health and safety of the public, and the related question whether any changes in the Commission's safety or environmental regulations are warranted. Because of the importance of the study and the Commission's desire for early public comment as to its content and implications, the study has been made available for public review and comment in this draft form. For the interim period, the Commission believes that the general public and the nuclear industry should be apprised of the Commission's present position on the basis of its current evaluation of the draft study—namely, whether, in the Commission's view, any immediate or short-term action is called for as a result of the draft study.

The draft study indicates that the risk from the operation of light water nuclear power reactors is very low. The draft study, while employing a different methodological approach from that reflected in 10 CFR Part 100, indicates that the approach to safety as set forth in the Commission's regulations, including Parts 50 and 100, has been successful and in accord with the Commission's requirement that there be reasonable assurance that nuclear power reactors can be operated without endangering the health and safety of the public.

In the approach to safety reflected in the Commission's regulations, postulated accidents, for purposes of analysis, are divided into two categories—"credible" and "incredible". The former ("credible") are considered to be within the category of design basis accidents. Protective measures are required and provided for all those postulated accidents falling within that category, and proposed sites are evaluated by taking into account the conservatively calculated consequences of a spectrum of severe postulated accidents. Those accidents falling within the "incredible" category are considered to be so improbable that no such protective measures are required.

By contrast, all conceivable accidents are considered in the draft study, and each type of accident is characterized as to both probability and consequences.

The application of Parts 50 and 100 helps assure public safety by basing protection to the public, both in design and siting, on a very conservative standard for determining and calculating the consequences of postulated potentially severe "credible" accidents. Part 100 was promulgated at a time when neither the probabilities nor the consequences of these accidents could be calculated with the desired degree of precision. It was, therefore, considered prudent, as a compensating measure, to require that the consequences of these potentially serious accidents be calculated very conservatively. Similarly, the acceptable dose guideline values in Part 100 used for evaluating the suitability of reactor sites were set conservatively low to compensate for any uncertainties in accident analysis. The draft study, on the other hand, offers a methodology for calculating, as realistically as is now possible, both the probabilities and the consequences of a wide spectrum of accidents, including those considered "incredible" for purposes of site evaluation under Part 100. Stated in another manner, under the approach taken in the draft study the distinction recognized in Part 100 between "credible" and "incredible" events is eliminated; instead, probability distribution functions for various accident consequences are provided.

Notwithstanding the differences in methodology between Parts 50 and 100 and the draft study, it is clear from the study that the safety and environmental risks from accidents in nuclear power reactors are deemed far lower than the risks from other natural and man-caused events.

The second question—whether any changes in the Commission's safety or environmental regulations are warranted at this time—also requires consideration. It is the Commission's present view that changes in its existing licensing regulations on the basis of the draft study would be premature until critical comment on the study has been received and analyzed and the final study has been completed and evaluated. Pending this, conservatism requires that neither the lower level consequences nor the lower level risks indicated in the draft study be used as a basis for relaxing the licensing requirements of Parts 50 and 100.

Similarly, discrete parts of the draft study cannot be considered in isolation from the study's overall risk assessment as a basis for present regulatory change. Thus, while the draft study indicates that the probabilities of a limited number of postulated core melt-down accidents may be appreciably higher than previously estimated, the probable consequences of such accidents are far less severe than previously expected and, more importantly, the risks (compounded of probabilities and consequences) from such accidents are very low—lower in fact than had been previously expected. In this connection, it is pertinent to note the reservations of the authors of the draft study with respect to the inappropriate-

ness of direct application of the study's results and methods to licensing decisions and other purposes outside its intended purpose of risk evaluation.

Accordingly, it is the interim position of the Commission that, pending completion and detailed evaluation of the final study, including public comment thereon, (1) no changes in the Commission's safety or environmental regulations pertaining to nuclear power plants are now warranted, (2) the Commission's existing requirements should not be relaxed, and (3) the contents of the draft study are not an appropriate basis for licensing decisions. In reaching this interim position, the Commission considers that neither consequences nor probabilities should be considered alone; that conservatism requires that neither the lower level consequences nor lower level risks indicated in the draft study should be used as a basis at this time for relaxing the Commission's existing requirements; and that the very low resultant risk described in the draft study amply justifies the conclusion that no immediate action is required or appropriate as a result of the draft study's present assessment of the probabilities and consequences of core melt-down. The foregoing position is not intended to preclude the possibility of later interim changes in the Commission's regulations during the period in which both the draft and final studies are under consideration if the Commission determines that such changes are warranted, either on the basis of its own review or as a result of public comment.

All interested persons who desire to submit written comments or suggestions for consideration in connection with this interim general statement of policy or the draft study discussed herein, including any comments or suggestions as to matters considered appropriate for rule making, should send them to the Secretary of the Commission, U.S. Atomic Energy Commission, Washington, D.C. 20545, Attention: Public Proceedings Staff, on or before November 1, 1974. Copies of comments received, as well as copies of the draft study "An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants", WASH-1400, may be examined at the Commission's Public Document Room, 1717 H Street, NW, Washington, D.C.

**Effective date:** The foregoing interim general statement of policy is effective August 27, 1974.

Published August 27, 1974

### Appendix R—Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979

#### I. Introduction and Scope

This Appendix applies to licensed nuclear power electric generating stations that were operating prior to January 1, 1979, except to the extent set forth in paragraph 50.48(b) of this part. With respect to certain generic issues for such facilities it sets forth fire protection features required to satisfy Criterion 3 of Appendix A to this part.<sup>1</sup>

<sup>1</sup>See footnote 4.

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Criterion 3 of Appendix A to this part specifies that "Structures, systems, and components important to safety shall be designed and located to minimize, consistent with other safety requirements, the probability and effect of fires and explosions."

When considering the effects of fire, those systems associated with achieving and maintaining safe shutdown conditions assume major importance to safety because damage to them can lead to core damage resulting from loss of coolant through boiloff.

The phrases "important to safety," or "safety-related," will be used throughout this Appendix R as applying to all safety functions. The phrase "safe shutdown" will be used throughout this Appendix R as applying to both hot and cold shutdown functions.

Because fire may affect safe shutdown systems and because the loss of function of systems used to mitigate the consequences of design basis accidents under postfire conditions does not per se impact public safety, the need to limit fire damage to systems required to achieve and maintain safe shutdown conditions is greater than the need to limit fire damage to those systems required to mitigate the consequences of design basis accidents. Three levels of fire damage limits are established according to the safety functions of the structure, system, or component:

| Safety function        | Fire damage limits                                                                                                                                                                                                                                       |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hot Shutdown           | One train of equipment necessary to achieve hot shutdown from either the control room or emergency control station(s) must be maintained free of fire damage by a single fire, including an exposure fire. <sup>1</sup>                                  |
| Cold Shutdown          | Both trains of equipment necessary to achieve cold shutdown may be damaged by a single fire, including an exposure fire, but damage must be limited so that at least one train can be repaired or made operable within 72 hours using onsite capability. |
| Design Basis Accidents | Both trains of equipment necessary for mitigation of consequences following design basis accidents may be damaged by a single exposure fire.                                                                                                             |

<sup>1</sup> **Exposure Fire.** An exposure fire is a fire in a given area that involves either in situ or transient combustibles and is external to any structures, systems, or components located in or adjacent to that same area. The effects of such fire (e.g., smoke, heat, or ignition) can adversely affect those structures, systems, or components important to safety. Thus, a fire involving one train of safe shutdown equipment may constitute an exposure fire for the redundant train located in the same area, and a fire involving combustibles other than either redundant train may constitute an exposure fire to both redundant trains located in the same area.

The most stringent fire damage limit shall apply for those systems that fall into more than one category. Redundant systems used to mitigate the consequences of other design basis accidents but not necessary for safe shutdown may be lost to a single exposure fire. However, protection shall be provided so that a fire within only one such system will not damage the redundant system.

### II. General Requirements

#### A. Fire Protection Program

A fire protection program shall be established at each nuclear power plant. The

program shall establish the fire protection policy for the protection of structures, systems, and components important to safety at each plant and the procedures, equipment, and personnel required to implement the program at the plant site.

The fire protection program shall be under the direction of an individual who has been delegated authority commensurate with the responsibilities of the position and who has available staff personnel knowledgeable in both fire protection and nuclear safety.

The fire protection program shall extend the concept of defense-in-depth to fire protection in fire areas important to safety, with the following objectives:

- to prevent fires from starting;
- to detect rapidly, control, and extinguish promptly those fires that do occur;
- to provide protection for structures, systems, and components important to safety so that a fire that is not promptly extinguished by the fire suppression activities will not prevent the safe shutdown of the plant.

#### B. Fire Hazards Analysis

A fire hazards analysis shall be performed by qualified fire protection and reactor systems engineers to (1) consider potential in situ and transient fire hazards; (2) determine the consequences of fire in any location in the plant on the ability to safely shut down the reactor or on the ability to minimize and control the release of radioactivity to the environment; and (3) specify measures for fire prevention, fire detection, fire suppression, and fire containment and alternative shutdown capability as required for each fire area containing structures, systems, and components important to safety in accordance with NRC guidelines and regulations.

#### C. Fire Prevention Features

Fire protection features shall meet the following general requirements for all fire areas that contain or present a fire hazard to structures, systems, or components important to safety.

1. In situ fire hazards shall be identified and suitable protection provided.
2. Transient fire hazards associated with normal operation, maintenance, repair, or modification activities shall be identified and eliminated where possible. Those transient fire hazards that can not be eliminated shall be controlled and suitable protection provided.
3. Fire detection systems, portable extinguishers, and standpipe and hose stations shall be installed.
4. Fire barriers or automatic suppression systems or both shall be installed as necessary to protect redundant systems or components necessary for safe shutdown.
5. A site fire brigade shall be established, trained, and equipped and shall be on site at all times.
6. Fire detection and suppression systems shall be designed, installed, maintained, and tested by personnel properly qualified by experience and training in fire protection systems.
7. Surveillance procedures shall be established to ensure that fire barriers are in place and that fire suppression systems and components are operable.

#### D. Alternative or Dedicated Shutdown Capability

In areas where the fire protection features cannot ensure safe shutdown capability in the event of a fire in that area, alternative or dedicated safe shutdown capability shall be provided.

### III. Specific Requirements

#### A. Water Supplies for Fire Suppression Systems

Two separate water supplies shall be provided to furnish necessary water volume and pressure to the fire main loop.

Each supply shall consist of a storage tank, pump, piping, and appropriate isolation and control valves. Two separate redundant suction in one or more intake structures from a large body of water (river, lake, etc.) will satisfy the requirement for two separated water storage tanks. These supplies shall be separated so that a failure of one supply will not result in a failure of the other supply.

Each supply of the fire water distribution system shall be capable of providing for a period of 2 hours the maximum expected water demands as determined by the fire hazards analysis for safety-related areas or other areas that present a fire exposure hazard to safety-related areas.

When storage tanks are used for combined service-water/fire-water uses the minimum volume for fire uses shall be ensured by means of dedicated tanks or by some physical means such as a vertical standpipe for other water service. Administrative controls, including locks for tank outlet valves, are unacceptable as the only means to ensure minimum water volume.

Other water systems used as one of the two fire water supplies shall be permanently connected to the fire main system and shall be capable of automatic alignment to the fire main system. Pumps, controls, and power supplies in these systems shall satisfy the requirements for the main fire pumps. The use of other water systems for fire protection shall not be incompatible with their functions required for safe plant shutdown. Failure of the other system shall not degrade the fire main system.

#### B. Sectional Isolation Valves

Sectional isolation valves such as post indicator valves or key operated valves shall be installed in the fire main loop to permit isolation of portions of the fire main loop for maintenance or repair without interrupting the entire water supply.

#### C. Hydrant Isolation Valves

Valves shall be installed to permit isolation of outside hydrants from the fire main for maintenance or repair without interrupting the water supply to automatic or manual fire suppression systems in any area containing or presenting a fire hazard to safety-related or safe shutdown equipment.

#### D. Manual Fire Suppression

Standpipe and hose systems shall be installed so that at least one effective hose stream will be able to reach any location that contains or presents an exposure fire hazard to structures, systems, or components important to safety.

Access to permit effective functioning of the fire brigade shall be provided to all areas that contain or present an exposure fire



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hazard to structures, systems, or components important to safety.

Standpipe and hose stations shall be inside PWR containments and BWR containments that are not inerted. Standpipe and hose stations inside containment may be connected to a high quality water supply of sufficient quantity and pressure other than the fire main loop if plant-specific features prevent extending the fire main supply inside containment. For BWR drywells, standpipe and hose stations shall be placed outside the dry well with adequate lengths of hose to reach any location inside the dry well with an effective hose stream.

### E. Hydrostatic Hose Tests

Fire hose shall be hydrostatically tested at a pressure of 300 psi or 50 psi above maximum fire main operating pressure, whichever is greater. Hose stored in outside hose houses shall be tested annually. Interior standpipe hose shall be tested every three years.

### F. Automatic Fire Detection

Automatic fire detection systems shall be installed in all areas of the plant that contain or present an exposure fire hazard to safe shutdown or safety-related systems or components. These fire detection systems shall be capable of operating with or without offsite power.

### G. Fire Protection of Safe Shutdown Capability

1. Fire protection features shall be provided for structures, systems, and components important to safe shutdown. These features shall be capable of limiting fire damage so that:

a. One train of systems necessary to achieve and maintain hot shutdown conditions from either the control room or emergency control station(s) is free of fire damage; and

b. Systems necessary to achieve and maintain cold shutdown from either the control room or emergency control station(s) can be repaired within 72 hours.

2. Except as provided for paragraph G.3 of this section, where cables or equipment, including associated non-safety circuits that could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground, or redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside of primary containment, one of the following means of ensuring that one of the redundant trains is free of fire damage shall be provided:

a. Separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating. Structural steel forming a part of or supporting such fire barriers shall be protected to provide fire resistance equivalent to that required of the barrier;

b. Separation of cables and equipment and associated non-safety circuits of redundant trains by a horizontal distance of more than 20 feet with no intervening combustible or fire hazards. In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area; or

c. Enclosure of cable and equipment and associated non-safety circuits of one redundant train in a fire barrier having a 1-

hour rating. In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area;

Inside noninerted containments one of the fire protection means specified above or one of the following fire protection means shall be provided:

d. Separation of cables and equipment and associated non-safety circuits of redundant trains by a horizontal distance of more than 20 feet with no intervening combustibles or fire hazards;

e. Installation of fire detectors and an automatic fire suppression system in the fire area; or

f. Separation of cables and equipment and associated non-safety circuits of redundant trains by a noncombustible radiant energy shield.

3. Alternative or dedicated shutdown capability and its associated circuits,\* independent of cables, systems or components in the area, room or zone under consideration, shall be provided:

a. Where the protection of systems whose function is required for hot shutdown does not satisfy the requirement of paragraph G.2 of this section; or

b. Where redundant trains of systems required for hot shutdown located in the same fire area may be subject to damage from fire suppression activities or from the rupture or inadvertent operation of fire suppression systems.

In addition, fire detection and a fixed fire suppression system shall be installed in the area, room, or zone under consideration.

### H. Fire Brigade

A site fire brigade trained and equipped for fire fighting shall be established to ensure adequate manual fire fighting capability for all areas of the plant containing structures, systems, or components important to safety. The fire brigade shall be at least five members on each shift. The brigade leader and at least two brigade members shall have sufficient training in or knowledge of plant safety-related systems to understand the effects of fire and fire suppressants on safe shutdown capability. The qualification of fire brigade members shall include an annual physical examination to determine their ability to perform strenuous fire fighting activities. The shift supervisor shall not be a member of the fire brigade. The brigade leader shall be competent to assess the potential safety consequences of a fire and advise control room personnel. Such competence by the brigade leader may be evidenced by possession of an operator's license or equivalent knowledge of plant safety-related systems.

The minimum equipment provided for the brigade shall consist of personal protective equipment such as turnout coats, boots, gloves, hard hats, emergency communications equipment, portable lights, portable ventilation equipment, and portable extinguishers. Self-contained breathing apparatus using full-face positive-pressure masks approved by NIOSH (National

\* Alternative shutdown capability is provided by rerouting, relocating or modifying of existing systems; dedicated shutdown capability is provided by installing new structures and systems for the function of post-fire shutdown.

Institute for Occupational Safety and Health—approval formerly given by the U.S. Bureau of Mines) shall be provided for fire brigade, damage control, and control room personnel. At least 10 masks shall be available for fire brigade personnel. Control room personnel may be furnished breathing air by a manifold system piped from a storage reservoir if practical. Service or rated operating life shall be a minimum of one-half hour for the self-contained units.

At least two extra air bottles shall be located on site for each self-contained breathing unit. In addition, an onsite 6-hour supply of reserve air shall be provided and arranged to permit quick and complete replenishment of exhausted supply air bottles as they are returned. If compressors are used as a source of breathing air, only units approved for breathing air shall be used; compressors shall be operable assuming a loss of offsite power. Special care must be taken to locate the compressor in areas free of dust and contaminants.

### I. Fire Brigade Training

The fire brigade training program shall ensure that the capability to fight potential fires is established and maintained. The program shall consist of an initial classroom instruction program followed by periodic classroom instruction, fire fighting practice, and fire drills:

#### 1. Instruction

a. The initial classroom instruction shall include:

(1) Indoctrination of the plant fire fighting plan with specific identification of each individual's responsibilities.

(2) Identification of the type and location of fire hazards and associated types of fires that could occur in the plant.

(3) The toxic and corrosive characteristics of expected products of combustion.

(4) Identification of the location of fire fighting equipment for each fire area and familiarization with the layout of the plant, including access and egress routes to each area.

(5) The proper use of available fire fighting equipment and the correct method of fighting each type of fire. The types of fires covered should include fires in energized electrical equipment, fires in cables and cable trays, hydrogen fires, fires involving flammable and combustible liquids or hazardous process chemicals, fires resulting from construction or modifications (welding), and record file fires.

(6) The proper use of communication, lighting, ventilation, and emergency breathing equipment.

(7) The proper method for fighting fires inside buildings and confined spaces.

(8) The direction and coordination of the fire fighting activities (fire brigade leaders only).

(9) Detailed review of fire fighting strategies and procedures.

(10) Review of the latest plant modifications and corresponding changes in fire fighting plans.

Note.—Items (9) and (10) may be deleted from the training of no more than two of the non-operations personnel who may be assigned to the fire brigade.

b. The instruction shall be provided by qualified individuals who are knowledgeable,

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experienced, and suitably trained in fighting the types of fires that could occur in the plant and in using the types of equipment available in the nuclear power plant.

c. Instruction shall be provided to all fire brigade members and fire brigade leaders.

d. Regular planned meetings shall be held at least every 3 months for all brigade members to review changes in the fire protection program and other subjects as necessary.

e. Periodic refresher training sessions shall be held to repeat the classroom instruction program for all brigade members over a two-year period. These sessions may be concurrent with the regular planned meetings.

### 2. Practice

Practice sessions shall be held for each shift fire brigade on the proper method of fighting the various types of fires that could occur in a nuclear power plant. These sessions shall provide brigade members with experience in actual fire extinguishment and the use of emergency breathing apparatus under strenuous conditions encountered in fire fighting. These practice sessions shall be provided at least once per year for each fire brigade member.

### 3. Drills

a. Fire brigade drills shall be performed in the plant so that the fire brigade can practice as a team.

b. Drills shall be performed at regular intervals not to exceed 3 months for each shift fire brigade. Each fire brigade member should participate in each drill, but must participate in at least two drills per year.

A sufficient number of these drills, but not less than one for each shift fire brigade per year, shall be unannounced to determine the fire fighting readiness of the plant fire brigade, brigade leader, and fire protection systems and equipment. Persons planning and authorizing an unannounced drill shall ensure that the responding shift fire brigade members are not aware that a drill is being planned until it is begun. Unannounced drills shall not be scheduled closer than four weeks.

At least one drill per year shall be performed on a "back shift" for each shift fire brigade.

c. The drills shall be preplanned to establish the training objectives of the drill and shall be critiqued to determine how well the training objectives have been met. Unannounced drills shall be planned and critiqued by members of the management staff responsible for plant safety and fire protection. Performance deficiencies of a fire brigade or of individual fire brigade members shall be remedied by scheduling additional training for the brigade or members. Unsatisfactory drill performance shall be followed by a repeat drill within 30 days.

d. At 3-year intervals, a randomly selected unannounced drill shall be critiqued by qualified individuals independent of the licensee's staff. A copy of the written report from such individuals shall be available for NRC review.

e. Drills shall as a minimum include the following:

(1) Assessment of fire alarm effectiveness, time required to notify and assemble fire

brigade, and selection, placement and use of equipment, and fire fighting strategies.

(2) Assessment of each brigade member's knowledge of his or her role in the fire fighting strategy for the area assumed to contain the fire. Assessment of the brigade member's conformance with established plant fire fighting procedures and use of fire fighting equipment, including self-contained emergency breathing apparatus, communication equipment, and ventilation equipment, to the extent practicable.

(3) The simulated use of fire fighting equipment required to cope with the situation and type of fire selected for the drill. The area and type of fire chosen for the drill should differ from those used in the previous drill so that brigade members are trained in fighting fires in various plant areas. The situation selected should simulate the size and arrangement of a fire that could reasonably occur in the area selected, allowing for fire development due to the time required to respond, to obtain equipment, and organize for the fire, assuming loss of automatic suppression capability.

(4) Assessment of brigade leader's direction of the fire fighting effort as to thoroughness, accuracy, and effectiveness.

### 4. Records

Individual records of training provided to each fire brigade member, including drill critiques, shall be maintained for at least 3 years to ensure that each member receives training in all parts of the training program. These records of training shall be available for NRC review. Retraining or broadened training for fire fighting within buildings shall be scheduled for all those brigade members whose performance records show deficiencies.

### J. Emergency Lighting

Emergency lighting units with at least an 8-hour battery power supply shall be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto.

### K. Administrative Controls

Administrative controls shall be established to minimize fire hazards in areas containing structures, systems, and components important to safety. These controls shall establish procedures to:

1. Govern the handling and limitation of the use of ordinary combustible materials, combustible and flammable gases and liquids, high efficiency particulate air and charcoal filters, dry ion exchange resins, or other combustible supplies in safety-related areas.

2. Prohibit the storage of combustibles in safety-related areas or establish designated storage areas with appropriate fire protection.

3. Govern the handling of and limit transient fire loads such as combustible and flammable liquids, wood and plastic products, or other combustible materials in buildings containing safety-related systems or equipment during all phases of operating, and especially during maintenance, modification, or refueling operations.

4. Designate the onsite staff member responsible for the inplant fire protection review of proposed work activities to identify potential transient fire hazards and specify

required additional fire protection in the work activity procedure.

5. Govern the use of ignition sources by use of a flame permit system to control welding, flame cutting, brazing, or soldering operations. A separate permit shall be issued for each area where work is to be done. If work continues over more than one shift, the permit shall be valid for not more than 24 hours when the plant is operating or for the duration of a particular job during plant shutdown.

6. Control the removal from the area of all waste, debris, scrap, oil spills, or other combustibles resulting from the work activity immediately following completion of the activity, or at the end of each work shift, whichever comes first.

7. Maintain the periodic housekeeping inspections to ensure continued compliance with these administrative controls.

8. Control the use of specific combustibles in safety-related areas. All wood used in safety-related areas during maintenance, modification, or refueling operations (such as lay-down blocks or scaffolding) shall be treated with a flame retardant. Equipment or supplies (such as new fuel) shipped in untreated combustible packing containers may be unpacked in safety-related areas if required for valid operating reasons.

However, all combustible materials shall be removed from the area immediately following the unpacking. Such transient combustible material, unless stored in approved containers, shall not be left unattended during lunch breaks, shift changes, or other similar periods. Loose combustible packing material such as wood or paper excelsior, or polyethylene sheeting shall be placed in metal containers with tight-fitting self-closing metal covers.

9. Control actions to be taken by an individual discovering a fire, for example, notification of control room, attempt to extinguish fire, and actuation of local fire suppression systems.

10. Control actions to be taken by the control room operator to determine the need for brigade assistance upon report of a fire or receipt of alarm on control room annunciator panel, for example, announcing location of fire over PA system, sounding fire alarms, and notifying the shift supervisor and the fire brigade leader of the type, size, and location of the fire.

11. Control actions to be taken by the fire brigade after notification by the control room operator of a fire, for example, assembling in a designated location, receiving directions from the fire brigade leader, and discharging specific fire fighting responsibilities including selection and transportation of fire fighting equipment to fire location, selection of protective equipment, operating instructions for use of fire suppression systems, and use of preplanned strategies for fighting fires in specific areas.

12. Define the strategies for fighting fires in all safety-related areas and areas presenting a hazard to safety-related equipment. These strategies shall designate:

a. Fire hazards in each area covered by the specific prefire plans.

b. Fire extinguishants best suited for controlling the fires associated with the fire

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hazards in that area and the nearest location of these extinguishants.

c. Most favorable direction from which to attack a fire in each area in view of the ventilation direction, access hallways, stairs, and doors that are most likely to be free of fire, and the best station or elevation for fighting the fire. All access and egress routes that involve locked doors should be specifically identified in the procedure with the appropriate precautions and methods for access specified.

d. Plant systems that should be managed to reduce the damage potential during a local fire and the location of local and remote controls for such management (e.g., any hydraulic or electrical systems in the zone covered by the specific fire fighting procedure that could increase the hazards in the area because of overpressurization or electrical hazards).

e. Vital heat-sensitive system components that need to be kept cool while fighting a local fire. Particularly hazardous combustibles that need cooling should be designated.

f. Organization of fire fighting brigades and the assignment of special duties according to job title so that all fire fighting functions are covered by any complete shift personnel complement. These duties include command control of the brigade, transporting fire suppression and support equipment to the fire scenes, applying the extinguishant to the fire, communication with the control room, and coordination with outside fire departments.

g. Potential radiological and toxic hazards in fire zones.

h. Ventilation system operation that ensures desired plant air distribution when the ventilation flow is modified for fire containment or smoke clearing operations.

i. Operations requiring control room and shift engineer coordination or authorization.

j. Instructions for plant operators and general plant personnel during fire.

### L. Alternative and Dedicated Shutdown Capability

1. Alternative or dedicated shutdown capability provided for a specific fire area shall be able to achieve and maintain subcritical reactivity conditions in the reactor, maintain reactor coolant inventory achieve and maintain hot standby<sup>7</sup> conditions for a PWR (hot shutdown<sup>7</sup> for a BWR) and achieve cold shutdown<sup>7</sup> conditions within 72 hours and maintain cold shutdown conditions thereafter. During the postfire shutdown, the reactor coolant system process variables shall be maintained within those predicted for a loss of normal a.c. power, and the fission product boundary integrity shall not be affected; i.e., there shall be no fuel clad damage, rupture or any primary coolant boundary, or rupture of the containment boundary.

2. The performance goals for the shutdown functions shall be:

a. The reactivity control function shall be capable of achieving and maintaining cold shutdown reactivity conditions.

b. The reactor coolant makeup function shall be capable of maintaining the reactor

coolant level above the top of the core for BWRs and be within the level indication in the pressurizer for PWRs.

c. The reactor heat removal function shall be capable of achieving and maintaining decay heat removal.

d. The process monitoring function shall be capable of providing direct readings of the process variables necessary to perform and control the above functions.

e. The supporting functions shall be capable of providing the process cooling, lubrication, etc., necessary to permit the operation of the equipment used for safe shutdown functions.

3. The shutdown capability for specific fire areas may be unique for each such area, or it may be one unique combination of systems for all such areas. In either case, the alternative shutdown capability shall be independent of the specific fire area(s) and shall accommodate postfire conditions where offsite power is available and where offsite power is not available for 72 hours. Procedures shall be in effect to implement this capability.

4. If the capability to achieve and maintain cold shutdown will not be available because of fire damage, the equipment and systems comprising the means to achieve and maintain the hot standby or hot shutdown condition shall be capable of maintaining such conditions until cold shutdown can be achieved. If such equipment and systems will not be capable of being powered by both onsite and offsite electric power systems because of fire damage, an independent onsite power system shall be provided. The number of operating shift personnel, exclusive of fire brigade members, required to operate such equipment and systems shall be on site at all times.

5. Equipment and systems comprising the means to achieve and maintain cold shutdown conditions shall not be damaged by fire; or the fire damage to such equipment and systems shall be limited so that the systems can be made operable and cold shutdown achieved within 72 hours. Materials for such repairs shall be readily available on site and procedures shall be in effect to implement such repairs. If such equipment and systems used prior to 72 hours after the fire will not be capable of being powered by both onsite and offsite electric power systems because of fire damage, an independent onsite power system shall be provided. Equipment and systems used after 72 hours may be powered by offsite power only.

6. Shutdown systems installed to ensure postfire shutdown capability need not be designed to meet seismic Category I criteria, single failure criteria, or other design basis accident criteria, except where required for other reasons, e.g., because of interface with or impact on existing safety systems, or because of adverse valve actions due to fire damage.

7. The safe shutdown equipment and systems for each fire area shall be known to be isolated from associated non-safety circuits in the fire area so that hot shorts, open circuits, or shorts to ground in the associated circuits will not prevent operation of the safe shutdown equipment. The

separation and barriers between trays and conduits containing associated circuits of one safe shutdown division and trays and conduits containing associated circuits or safe shutdown cables from the redundant division, or the isolation of these associated circuits from the safe shutdown equipment, shall be such that a postulated fire involving associated circuits will not prevent safe shutdown.<sup>a</sup>

### M. Fire Barrier Cable Penetration Seal Qualification

Penetration seal designs shall utilize only noncombustible materials and shall be qualified by tests that are comparable to tests used to rate fire barriers. The acceptance criteria for the test shall include:

1. The cable fire barrier penetration seal has withstood the fire endurance test without passage of flame or ignition of cables on the unexposed side for a period of time equivalent to the fire resistance rating required of the barrier.

2. The temperature levels recorded for the unexposed side are analyzed and demonstrate that the maximum temperature is sufficiently below the cable insulation ignition temperature; and

3. The fire barrier penetration seal remains intact and does not allow projection of water beyond the unexposed surface during the hose stream test.

### N. Fire Doors

Fire doors shall be self-closing or provided with closing mechanisms and shall be inspected semiannually to verify that automatic hold-open, release, and closing mechanisms and latches are operable.

One of the following measures shall be provided to ensure they will protect the opening as required in case of fire:

1. Fire doors shall be kept closed and electrically supervised at a continuously manned location;

2. Fire doors shall be locked closed and inspected weekly to verify that the doors are in the closed position;

3. Fire doors shall be provided with automatic hold-open and release mechanisms and inspected daily to verify that doorways are free of obstructions; or

4. Fire doors shall be kept closed and inspected daily to verify that they are in the closed position.

The fire brigade leader shall have ready access to keys for any locked fire doors.

Areas protected by automatic total flooding gas suppression systems shall have electrically supervised self-closing fire doors or shall satisfy option 1 above.

### O. Oil Collection System for Reactor Coolant Pump

The reactor coolant pump shall be equipped with an oil collection system if the containment is not inerted during normal operation. The oil collection system shall be so designed, engineered, and installed that failure will not lead to fire during normal or design basis accident conditions and that

<sup>a</sup> An acceptable method of complying with this alternative would be to meet Regulatory Guide 1.75 position 4 related to associated circuits and IEEE Std 384-1974 (Section 4.5) where trays from redundant safety divisions are so protected that postulated fires affect trays from only one safety division.

<sup>7</sup> As defined in the Standard Technical Specifications.

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there is reasonable assurance that the system will withstand the Safe Shutdown Earthquake \*

Such collection systems shall be capable of collecting lube oil from all potential pressurized and unpressurized leakage sites in the reactor coolant pump lube oil systems. Leakage shall be collected and drained to a vented closed container that can hold the entire lube oil system inventory. A flame arrester is required in the vent if the flash point characteristics of the oil present the hazard of fire flashback. Leakage points to be protected shall include lift pump and piping, overflow lines, lube oil cooler, oil fill and drain lines and plugs, flanged connections on oil lines, and lube oil reservoirs where such features exist on the reactor coolant pumps. The drain line shall be large enough to accommodate the largest potential oil leak.

\* See Regulatory Guide 1.20—"Seismic Design Classification" Paragraph C.2.





UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

**PART  
50**

**DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES**

**PROPOSED RULE MAKING**

36 FR 22851  
Published 12/1/71  
Comment Period expires 12/31/71

**Consideration of Accidents in Implementation of the National Environmental Policy Act of 1969**

The Atomic Energy Commission has under consideration amendments to Appendix D of its regulation 10 CFR Part 50, Licensing of Production and Utilization Facilities, an "Interim Statement of General Policy and Procedure: Implementation of the National Environmental Policy Act of 1969 (Public Law 91-190)." The proposed amendments would, by the addition of an annex to Appendix D, specify certain standardized accident assumptions to be used in Environmental Reports submitted by applicants for construction permits or operating licenses for nuclear power reactors pursuant to Appendix D.<sup>1</sup> The accident assumptions and other provisions of the proposed amendments would also be applicable to AEC draft and final Detailed Statements.

The Commission invites written comments or suggestions from all interested persons on the proposed amendments set forth below as well as on the treatment of the probabilities of the accidents.

The Commission expects that the provisions of the proposed amendments will be useful as interim guidance until such time as the Commission takes further action on them.

Pursuant to the Atomic Energy Act of 1954, as amended, and section 553 of title 5 of the United States Code, notice is hereby given that adoption of the following amendments to 10 CFR Part 50 is contemplated. All interested persons who desire to submit written comments or

suggestions for consideration in connection with the proposed amendments should send them to the Secretary of the Commission, U.S. Atomic Energy Commission, Washington, D.C. 20545, Attention: Chief, Public Proceedings Branch, within 30 days after publication of this notice in the Federal Register. Copies of comments received may be examined in the Commission's Public Document Room, 1717 H Street NW., Washington, DC.

1. A sentence is added at the end of paragraph 4, of section A of Appendix D to read as follows:

APPENDIX D—INTERIM STATEMENT OF GENERAL POLICY AND PROCEDURE: IMPLEMENTATION OF THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 (PUBLIC LAW 91-190)

A. Basic procedures.

4. . . . The Environmental Report required by paragraph 1 shall also include a discussion of accidents, based on the assumptions set forth in the annex to this appendix.

2. An annex is added to Appendix D to read as follows:

ANNEX

DISCUSSION OF ACCIDENTS IN APPLICANTS' ENVIRONMENTAL REPORTS: ASSUMPTIONS

This Annex requires certain assumptions to be made in discussion of accidents in Environmental Reports submitted pursuant to Appendix D by applicants<sup>1</sup> for construction permits or operating licenses for nuclear

<sup>1</sup> In conjunction with the revision of Appendix D on Sept. 9, 1971 (36 F.R. 18071), there was transmitted to applicants for licenses to construct or operate nuclear power plants, and made available to the public, a document dated Sept. 1, 1971, entitled "Scope of Applicant's Environmental Reports with Respect to Transportation, Transmission Lines and Accidents." This document was a supplement to the guidance provided to license applicants in the "Draft AEC Guide to the Preparation of Environmental Reports for Nuclear Power Plants," dated Feb. 19, 1971, also made available to the public.

See next page for footnote 2.

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power reactors.<sup>1</sup>

Postulated accidents are discussed in another context in applicants' safety analysis reports. The principal line of defense is accident prevention through correct design, manufacture, and operation, and a quality assurance program is used to provide and maintain the necessary high integrity of the reactor system. Deviations that may occur are handled by protective systems to place and hold the plant in a safe condition. Notwithstanding all this, the conservative postulate is made that serious accidents might occur, in spite of the fact that they are extremely unlikely, and engineered safety features are installed to mitigate the consequences of these unlikely postulated events.

In the consideration of the environmental risks associated with the postulated accidents, the probabilities of their occurrence and their consequences must both be taken into account. Since it is not practicable to consider all possible accidents, the spectrum of accidents, ranging in severity from trivial to very serious, is divided into classes.

Each class can be characterized by an occurrence rate and a set of consequences.

Standardized examples of classes of accidents to be considered by applicants in preparing the section of Environmental Reports dealing with accidents are set out in tabular form below. The spectrum of accidents, from the most trivial to the most severe, is divided into nine classes, some of which have subclasses. The accidents stated in each of the eight classes in tabular form below are representative of the types of accidents that must be analyzed by the applicant in Environmental Reports; however, other accident assumptions may be more suitable for individual cases. Where assumptions are not specified, or where those specified are deemed unsuitable, assumptions as realistic as the state of knowledge permits shall be used, taking into account the specific design and operational characteristics of the plant under consideration.

For each class, except Classes 1 and 9, the environmental consequences shall be evaluated as indicated. Those classes of accidents, other than Classes 1 and 9, found to have significant adverse environmental effects shall be evaluated as to probability, or frequency of occurrence, to permit estimates to be made of environmental risk or cost arising from accidents of the given class.

Class 1 events need not be considered because of their trivial consequences.

Class 8 events are those considered in safety analysis reports and AEC staff safety evaluations. They are used, together with highly conservative assumptions, as the design-basis events to establish the performance requirements of engineered safety features. The highly conservative assumptions and calculations used in AEC safety evaluations are not suitable for environmental risk evaluation, because their use would result in

a substantial overestimate of the environmental risk. For this reason, Class 8 events shall be evaluated realistically. Consequences predicted in this way will be far less severe than those given for the same events in safety analysis reports where more conservative evaluations are used.

The occurrences in Class 9 involve sequences of postulated successive failures more severe than those postulated for the design basis for protective systems and engineered safety features. Their consequences could be severe. However, the probability of their occurrence is so small that their environmental risk is extremely low. Defense in depth (multiple physical barriers), quality assurance for design, manufacture, and operation, continued surveillance and testing, and conservative design are all applied to provide and maintain the required high degree of assurance that potential accidents in this class are, and will remain, sufficiently remote in probability that the environmental risk is extremely low. For these reasons, it is not necessary to discuss such events in applicants' Environmental Reports.

Furthermore, it is not necessary to take into account those Class 8 accidents for which the applicant can demonstrate that the probability has been reduced and thereby the calculated risk to the environment made equivalent to that which might be hypothesized for a Class 9 event.

Applicants may substitute other accident class breakdowns and alternative values of radioactive material releases and analytical assumptions, if such substitution is justified in the Environmental Report.

### ACCIDENT ASSUMPTIONS

#### TABLE OF CONTENTS

- Accident
- 1.0 Trivial incidents.
- 2.0 Small releases outside containment.
- 3.0 Radwaste system failures.
  - 3.1 Equipment leakage or malfunction.
  - 3.2 Release of waste gas storage tank contents.
  - 3.3 Release of liquid waste storage tank contents.
- 4.0 Fission products to primary system (BWR).
  - 4.1 Fuel cladding defects.
  - 4.2 Off-design transients that induce fuel failures above those expected.
- 5.0 Fission products to primary and secondary systems (PWR).
  - 5.1 Fuel cladding defects and steam generator leaks.
  - 5.2 Off-design transients that induce fuel failure above those expected and steam generator leak.
  - 5.3 Steam generator tube rupture.
- 6.0 Refueling accidents.
  - 6.1 Fuel bundle drop.
  - 6.2 Heavy object drop onto fuel in core.
- 7.0 Spent fuel handling accident.
  - 7.1 Fuel assembly drop in fuel storage pool.
  - 7.2 Heavy object drop onto fuel rack.
  - 7.3 Fuel cask drop.
- 8.0 Accident initiation events considered in design basis evaluation in the safety analysis report.
  - 8.1 Loss-of-coolant accidents.
    - 8.1(a) Break in instrument line from primary system that penetrates the containment.
    - 8.2(a) Rod ejection accident (PWR).
    - 8.2(b) Rod drop accident (BWR).
    - 8.3(a) Steamline breaks (PWRs outside containment).
    - 8.3(b) Steamline breaks (BWR).

### ACCIDENT ASSUMPTIONS

#### ACCIDENT—1.0 TRIVIAL INCIDENTS

These incidents shall be included and evaluated under routine releases in accordance with proposed Appendix I.<sup>2</sup>

<sup>1</sup>36 F.R. 11113, June 8, 1971.

#### ACCIDENT—2.0 SMALL RELEASE OUTSIDE CONTAINMENT

These releases shall include such things as releases through steamline relief valves and small spills and leaks of radioactive materials outside containment. These releases shall be included and evaluated under routine releases in accordance with proposed Appendix I.

#### ACCIDENT—3.0 RADWASTE SYSTEM FAILURES

3.1 Equipment leakage or malfunction (includes operator error).

(a) Radioactive gases and liquids: 25 percent of average inventory in the largest storage tank shall be assumed to be released.

(b) Meteorology assumptions— $x/Q$  values are to be 1/10 of those given in AEC Safety Guide No. 3 or 4.<sup>2</sup>

(c) Consequences should be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

3.2 Release of waste gas storage tank contents (includes failure of release valve and rupture disks).

(a) 100 percent of the average tank inventory shall be assumed to be released.

(b) Meteorology assumptions— $x/Q$  values shall be 1/10 of those given in AEC Safety Guide No. 3 or 4.

(c) Consequences should be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

3.3 Release of liquid waste storage tank contents.

(a) Radioactive liquids—100 percent of the average storage tank inventory shall be assumed to be spilled on the floor of the building.

(b) Building structure shall be assumed to remain intact.

(c) Meteorology assumptions— $x/Q$  values shall be 1/10 of those given in AEC Safety Guide No. 3 or 4.

(d) Consequences should be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

#### ACCIDENT—4.0 FISSION PRODUCTS TO PRIMARY SYSTEM (BWR)

##### 4.1 Fuel cladding defects.

Releases from these events shall be included and evaluated under routine releases in accordance with proposed Appendix I.

4.2 Off-design transients that induce fuel failures above those expected (such as flow blockage and flux maldistributions).

(a) 0.02 percent of the core inventory of noble gases and 0.02 percent of the core inventory of halogens shall be assumed to be released into the reactor coolant.

(b) 1 percent of the halogens in the reactor coolant shall be assumed to be released into the steam.

(c) The mechanical vacuum pump shall be assumed to be automatically isolated by a high radiation signal on the steamline.

(d) Radioactivity shall be assumed to carry over to the condenser where 10 percent of the halogens shall be assumed to be available for leakage from the condenser to the environment at 0.5 percent/day for the course of the accident (24 hours).

(e) Meteorology assumptions— $x/Q$  values shall be 1/10 of those given in AEC Safety Guide No. 3 dated November 2, 1970.

(f) Consequences should be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

<sup>2</sup> Copies of such Guide(s), dated Nov. 2, 1970, are available at the Commission's Public Document Room, 1717 H Street NW, Washington, DC, and on request to the Director, Division of Reactor Standards, U.S. Atomic Energy Commission, Washington, D.C. 20545.

<sup>1</sup> Preliminary guidance as to the content of applicants' Environmental Reports was provided in the Draft AEC Guide to the Preparation of Environmental Reports for Nuclear Power Plants dated Feb. 19, 1971, a document made available to the public as well as to the applicant. Guidance concerning the discussion of accidents in environmental reports was provided to applicants in a Sept. 1, 1971, document entitled "Scope of Applicants' Environmental Reports with Respect to Transportation, Transmission Lines and Accidents," also made available to the public.

<sup>2</sup> Although this annex refers to applicants' Environmental Reports, the current assumptions and other provisions thereof are applicable, except as the content may otherwise require, to AEC draft and final Detailed Statements.

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### ACCIDENT—5.0 FISSION PRODUCTS TO PRIMARY AND SECONDARY SYSTEMS (PRESSURIZED WATER REACTOR)

#### 5.1 Fuel cladding defects and steam generator leak.

Releases from these events shall be included and evaluated under routine releases in accordance with proposed Appendix I.

#### 5.2 Off-design transients that induce fuel failure above those expected and steam generator leak (such as flow blockage and flux maldistributions).

(a) 0.02 percent of the core inventory of noble gases and 0.02 percent of the core inventory of halogens shall be assumed to be released into the reactor coolant.

(b) Average inventory in the primary system prior to the transient shall be based on operation with 0.5 percent failed fuel.

(c) Secondary system equilibrium radioactivity prior to the transient shall be based on a 20 gal./day steam generator leak and a 10 g.p.m. blowdown rate.

(d) All noble gases and 0.1 percent of the halogens in the steam reaching the condenser shall be assumed to be released by the condenser air ejector.

(e) Meteorology assumptions— $\chi/Q$  values shall be 1/10 of those given in AEC Safety Guide No. 4.

(f) Consequences should be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

#### 5.3 Steam generator tube rupture.

(a) 15 percent of the average inventory of noble gases and halogens in the primary coolant shall be assumed to be released into the secondary coolant.

The average primary coolant activity shall be based on 0.5 percent failed fuel.

(b) Equilibrium radioactivity prior to rupture shall be based on a 20 gallon per day steam generator leak and a 10 g.p.m. blowdown rate.

(c) All noble gases and 0.1 percent of the halogens in the steam reaching the condenser shall be assumed to be released by the condenser air ejector.

(d) Meteorology assumptions— $\chi/Q$  values shall be 1/10 of those given in AEC Safety Guide No. 4.

(e) Consequences should be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

### ACCIDENT—6.0 REFUELING ACCIDENTS

#### 6.1 Fuel bundle drop.

(a) The gap activity (noble gases and halogens) in one row of fuel pins shall be assumed to be released into the water. (Gap activity is 1 percent of total activity in a pin.)

(b) One week decay time before the accident occurs shall be assumed.

(c) Iodine decontamination factor in water shall be 500.

(d) Charcoal filter efficiency for iodines shall be 99 percent.

(e) A realistic fraction of the containment volume shall be assumed to leak to the atmosphere prior to isolating the containment.

(f) Meteorology assumptions— $\chi/Q$  values shall be 1/10 of those given in AEC Safety Guide No. 3 or 4.

(g) Consequences should be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

#### 6.2 Heavy object drop onto fuel in core.

(a) The gap activity (noble gases and halogens) in one average fuel assembly shall be assumed to be released into the water. (Gap activity shall be 1 percent of total activity in a pin.)

(b) 100 hours of decay time before object is dropped shall be assumed.

(c) Iodine decontamination factor in water shall be 500.

(d) Charcoal filter efficiency for iodines

shall be 99 percent.

(e) A realistic fraction of the containment volume shall be assumed to leak to the atmosphere prior to isolating the containment.

(f) Meteorology assumptions— $\chi/Q$  values shall be 1/10 of those given in AEC Safety Guide No. 3 or 4.

(g) Consequences should be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

### ACCIDENT—7.0 SPENT FUEL HANDLING ACCIDENT

#### 7.1 Fuel assembly drop in fuel storage pool.

(a) The gap activity (noble gases and halogens) in one row of fuel pins shall be assumed to be released into the water. (Gap activity shall be 1 percent of total activity in a pin.)

(b) One week decay time before accident occurs shall be assumed.

(c) Iodine decontamination factor in water shall be 500.

(d) Charcoal filter efficiency for iodines shall be 99 percent.

(e) Meteorology assumptions— $\chi/Q$  values shall be 1/10 of those given in AEC Safety Guide No. 3 or 4.

(f) Consequences shall be calculated by weighting the effects in different directions

by the frequency the wind blows in each direction.

#### 7.2 Heavy object drop onto fuel rack.

(a) The gap activity (noble gases and halogens) in one average fuel assembly shall be assumed to be released into the water. (Gap activity is 1 percent of total activity in a pin.)

(b) 30 days decay time before the accident occurs shall be assumed.

(c) Iodine decontamination factor in water shall be 500.

(d) Charcoal filter efficiency for iodines shall be 99 percent.

(e) Meteorology assumptions— $\chi/Q$  values shall be 1/10 of those given in AEC Safety Guide No. 3 or 4.

(f) Consequences should be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

#### 7.3 Fuel cask drop.

(a) Noble gas gap activity from one fully loaded fuel cask (120 day cooling) shall be assumed to be released. (Gap activity shall be 1 percent of total activity in the pins.)

(b) Meteorology assumptions— $\chi/Q$  values shall be 1/10 of those given in AEC Safety Guide No. 3 or 4.

(c) Consequences should be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

### ACCIDENT—8.0 ACCIDENT INITIATION EVENTS CONSIDERED IN DESIGN BASIS EVALUATION IN THE SAFETY ANALYSIS REPORT

#### 8.1 Loss-of-coolant accidents.

##### Small pipe break (6" or less)

(a) Source term—The average radioactivity inventory in the primary coolant shall be assumed (This inventory shall be based on operation with 0.5 percent failed fuel).

(b) Filter efficiencies shall be 95 percent for internal filters and 99 percent for external filters.

(c) 50 percent building mixing for boiling water reactors shall be assumed.

(d) For the effects of Plateout, Sprays, Decontamination Factor in Pool, and Core Sprays the following reduction factors shall be assumed:

For pressurized water reactors—0.05 with chemical additives in sprays, 0.2 for no chemical additives.

For boiling water reactors—0.2.

(e) A realistic building leak rate as a function of time shall be assumed.

(f) Meteorology Assumptions— $\chi/Q$  values shall be 1/10 of those given in AEC Safety Guide No. 3 or 4.

(g) Consequences should be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

##### Large pipe break

(a) Source term—The average radioactivity inventory in the primary coolant shall be assumed (This inventory shall be based on operation with 0.5 percent failed fuel), plus release into the coolant of:

For pressurized water reactors—2 percent of the core inventory of halogens and noble gases.

For boiling water reactors—0.2 percent of the core inventory of halogens and noble gases.

(b) Filter efficiencies shall be 95 percent for internal filters and 99 percent for external filters.

(c) 50 percent building mixing for boiling water reactors shall be assumed.

(d) For the effects of Plateout, Containment Sprays, Core Sprays (values based on 0.5 percent of halogens in organic form) the following reduction factors shall be assumed:

For pressurized water reactors—0.05 with chemical additives in sprays, 0.2 for no chemical additives.

For boiling water reactors—0.2.

(e) A realistic building leak rate as a function of time and including design leakage of steamline valves in BWRs shall be assumed.

(f) Meteorology Assumptions— $\chi/Q$  values shall be 1/10 of those given in AEC Safety Guide No. 3 or 4.

(g) Consequences should be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

(d) Reduction factor from combined plateout and building mixing shall be 0.1.

(e) Meteorology assumptions— $\chi/Q$  values shall be 1/10 of those given in AEC Safety Guide No. 3.

(f) Consequences shall be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

8.2(a) Rod ejection accident (pressurized water reactor).

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(a) 0.2 percent of the core inventory of noble gases and halogens shall be assumed to be released into the primary coolant plus the average inventory in the primary coolant based on operation with 0.5 percent failed fuel.

(b) Loss-of-coolant accident occurs with break size equivalent to diameter of rod housing (See assumptions for Accident 8.1).

8.2(b) Rod drop accident (boiling water reactor).

*Radioactive material released.*

(a) 0.025 percent of the core inventory of noble gases and 0.025 percent of the core inventory of halogens shall be assumed to be released into the coolant.

(b) 1 percent of the halogens in the re-

actor coolant shall be assumed to be released into the condenser.

(c) The mechanical vacuum pump shall be assumed to be automatically isolated by high radiation signal on the steamline.

(d) Radioactivity shall be assumed to carry over to the condenser where 10 percent of the halogens shall be assumed to be available for leakage from the condenser to the environment at 0.5 percent/day for the course of the accident (24 hours).

(e) Meteorology assumptions— $\chi/Q$  values shall be 1/10 of those given in AEC Safety Guide No. 3.

(f) Consequences should be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

8.3(a) Steamline breaks (pressurized water reactors—outside containment).  
Break size equal to area of safety valve throat.

*Small break*

(a) Primary coolant activity shall be based on operation with 0.5 percent failed fuel. The primary system contribution during the course of the accident shall be based on a 20 gal./day tube leak.

(b) During the course of the accident a halogen reduction factor of 0.1 shall be applied to the primary coolant source when the steam generator tubes are covered; a factor of 0.5 shall be used when the tubes are uncovered.

(c) Secondary coolant system radioactivity prior to the accident shall be based on:

(a) 20 gallons per day primary-to-secondary leak.

(b) Blowdown of 10 g.p.m.

(d) Volume of one steam generator shall be assumed to be released to the atmosphere with an iodine partition factor of 10.

(e) Meteorology Assumptions— $\chi/Q$  values shall be  $\frac{1}{10}$  of those given in AEC Safety Guide No. 4.

(f) Consequences shall be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

8.3(b) Steamline breaks (boiling water reactor).

*Small pipe break (of  $\frac{1}{4}$  ft.)*

(a) Primary coolant activity shall be based on operation with 0.5 percent failed fuel.

(b) The main steamline shall be assumed to fail releasing coolant until 5 seconds after isolation signal is received.

(c) Halogens in the fluid released to the atmosphere shall be at 1/10 the primary system liquid concentration.

(d) Meteorology assumptions— $\chi/Q$  values shall be 1/10 of those in AEC Safety Guide No. 3.

(e) Consequences shall be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

*Large break*

(a) Primary coolant activity shall be based on operation with 0.5 percent failed fuel. The primary system contribution during the course of the accident shall be based on a 20 gal./day tube leak.

(b) A halogen reduction factor of 0.5 shall be applied to the primary coolant source during the course of the accident.

(c) Secondary coolant system radioactivity prior to the accident shall be based on:

(a) 20 gallons per day primary-to-secondary leak.

(b) Blowdown of 10 g.p.m.

(d) Volume of one steam generator shall be assumed to be released to the atmosphere with an iodine partition factor of 10.

(e) Meteorology Assumptions— $\chi/Q$  values shall be  $\frac{1}{10}$  of those given in AEC Safety Guide No. 4.

(f) Consequences shall be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.

*Large break*

(a) Primary coolant activity shall be based on operation with 0.5 percent failed fuel.

(b) Main steamline shall be assumed to fail releasing that amount of coolant corresponding to a 5-second isolation time.

(c) 1/2 the halogens in the fluid exiting the break shall be assumed to be released to the atmosphere.

(d) Meteorology assumptions— $\chi/Q$  values shall be 1/10 of those in AEC Safety Guide No. 3.

(e) Consequences shall be calculated by weighting the effects in different directions by the frequency the wind blows in each direction.



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Commission would require assurance in the final safety analysis report that these criteria had been satisfied in the detailed design and construction of the facility and that any changes in such criteria are justified.

One of these criteria is that fuel reprocessing plants should be designed to facilitate decommissioning. The Commission requires that residual levels of radioactive contamination after decommissioning of a facility be sufficiently low as not to represent a hazard to the public health and safety. The Commission, after consultation with interested groups, intends to publish specific requirements for decommissioning which would be included in 10 CFR Part 50 after a rule-making proceeding.

Concurrently with the publication for comment of this notice of proposed rule-making, the Commission is making available to the public its "Environmental Impact Appraisal of Proposed Amendments to 10 CFR Part 50, General Design Criteria for Fuel Reprocessing Plants." Copies of the "Environmental Impact Appraisal of Proposed Amendments to 10 CFR Part 50, General Design Criteria for Fuel Reprocessing Plants" may be obtained by writing the U.S. Atomic Energy Commission, Washington, D.C. 20545, Attention: Director of Regulatory Standards.

Pursuant to the Atomic Energy Act of 1954, as amended, and section 553 of title 5 of the United States Code, notice is hereby given that adoption of the following amendments to 10 CFR Part 50 is contemplated. All interested persons who desire to submit written comments or suggestions for consideration in connection with the proposed amendments should send them to the Secretary of the Commission, U.S. Atomic Energy Commission, Washington, D.C. 20545, Attention: Chief, Public Proceedings Staff by September 16, 1974. Copies of comments received on the proposed amendments may be examined at the Commission's Public Document Room at 1717 H Street NW, Washington, D.C.

1. Paragraph (a) (3) (i) of § 50.34 is amended to read as follows:

§ 50.34 Contents of applications: Technical information.

(a) Preliminary safety analysis report. Each application for a construction permit shall include a preliminary safety analysis report. The minimum information to be included shall consist of the following:

(3) The preliminary design of the facility including:

(i) The principal design criteria for the facility.

Appendix A, General Design Criteria for Nuclear Power Plants, establishes minimum requirements for the principal design criteria for water-cooled nuclear power plants similar in design and location to plants for which construction permits previously have been issued by the Commission and provides guidance to applicants for construction permits in establishing principal design criteria for other types of nuclear power units. Ap-

pendix P, General Design Criteria for Fuel Reprocessing Plants, establishes minimum requirements for the principal design criteria for fuel reprocessing plants;

2. Footnote 2 to § 50.34 is deleted.

3. A new Appendix P is added to read as follows:

### APPENDIX P—GENERAL DESIGN CRITERIA FOR FUEL REPROCESSING PLANTS

#### I. INTRODUCTION

#### II. DEFINITIONS

Fuel reprocessing plant  
Radiological protection  
Confinement system  
Single failure  
Process safety features  
Redundant equipment or system

#### III. CRITERIA

##### OVERALL REQUIREMENTS

|                                                                                   | Number |
|-----------------------------------------------------------------------------------|--------|
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| Protection against fires and explosions                                           | 3      |
| Sharing of structures, systems, and components.....                               | 4      |
| Proximity of sites.....                                                           | 5      |
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#### I. INTRODUCTION

Pursuant to the provisions of § 50.34, an application for a construction permit for a fuel reprocessing plant must include the principal design criteria for the proposed facility. The principal design criteria establish the design, fabrication, construction, testing, and performance requirements for structures, systems, and components important to safety; that is, structures, systems, and components that provide reasonable assurance that the facility can be operated without undue risk to the health and safety of the public.

These General Design Criteria are intended

\* [Deleted]

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(extended to 9/30/74)

### General Design Criteria for Fuel Reprocessing Plants

The Atomic Energy Commission has under consideration amendments to its regulation 10 CFR Part 50, "Licensing of Production and Utilization Facilities," which would add an Appendix P, "General Design Criteria for Fuel Reprocessing Plants."

Paragraph (a) of § 50.34 requires that each application for a construction permit include, in the safety analysis report, the preliminary design for the facility. The following information is specified for inclusion:

(i) The principal design criteria for the facility;

(ii) The design bases and relation of the design bases to the principal design criteria;

(iii) Information relative to materials of construction, general arrangements, and approximate dimensions, sufficient to provide reasonable assurance that the final design will conform to the design bases with adequate margin for safety.

The "General Design Criteria for Fuel Reprocessing Plants" which follow would establish the minimum requirements for the principal design criteria for fuel reprocessing plants. Principal design criteria established by a license applicant and accepted by the Commission would be incorporated by reference into the construction permit. Before issuing an operating license under Part 50, the



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to aid the applicant for a construction permit for a fuel reprocessing plant in selection of the principal design criteria and to establish minimum requirements for the principal safety-related design criteria for fuel reprocessing plants. The development of these General Design Criteria is not yet complete. Any omissions do not relieve the applicant from the requirement of providing the necessary safety features in the design of a specific facility. In addition to satisfying the General Design Criteria, the applicant must:

1. Design against the loss of confinement capability or other capability which would jeopardize the health and safety of the public where such loss of capability results from any single failure in systems important to safety;

2. Provide redundancy and diversity in systems important to safety;

3. Minimize the possibility of non-random, concurrent failures of redundant elements in protection systems;

4. Provide design criteria for resistance of the facility to upper limit accidents and design bases for maximum probable natural phenomena;

5. Provide adequate protection for employees from hazards which could affect their performance of actions required to protect the public from exposure to radiation.

There may be some fuel reprocessing plants for which the General Design Criteria are not sufficient and for which additional criteria must be satisfied in the interest of public safety. In particular, it is expected that additional or different criteria will be needed to take into account variations in site and environmental conditions. Also, some of the General Design Criteria may not be necessary or appropriate for a specific plant. For plants such as these, departures from the General Design Criteria must be identified and justified.

### II. DEFINITIONS

**Fuel reprocessing plant.** A fuel reprocessing plant means the structures, systems, and components required for the separation, recovery, storage, and handling of fissile and fertile nuclear material, byproducts, and waste from irradiated nuclear fuels or materials, and includes those structures and protection systems or components required to provide reasonable assurance that the plant can be operated without undue risk to the health and safety of the public.

**Radiological protection.** Radiological protection means protection against internal and external ionizing radiation.

**Confinement system.** A confinement system means the barrier and its associated systems, including ventilation, between areas containing radioactive substances and the environment or areas in the plant which are normally expected to have levels of radioactivity lower than that which the barrier is designed to confine.

**Single failure.** A single failure means an occurrence which results in the loss of capability of a component to perform its intended safety function(s). Multiple failures, i.e., loss of capability of several components, resulting from a single occurrence are considered to be a single failure. Systems are considered to be designed against an assumed single failure if neither (1) a single failure of any active component (assuming passive components function properly) nor (2) a single failure of any passive component (assuming active components function properly) results in a loss of the capability of the system to perform its safety functions.

**Process safety features.** A process safety feature means a feature designed to prevent, limit, or mitigate the release of radioactive material.

**Redundant equipment or system.** Any equipment or system that duplicates the essential function of any other equipment or

system is considered to be redundant to the extent that either may perform the required function regardless of the state of operation or failure of the other.

### III. CRITERIA OVERALL REQUIREMENTS

**Criterion 1—Quality standards and records.** Structures, systems, and components important to safety shall be designed, fabricated, erected, and tested in accordance with quality assurance criteria in Appendix B. Appropriate records of the design, fabrication, erection, and testing of structures, systems, and components important to safety shall be maintained by or under the control of the fuel reprocessing plant licensee throughout the life of the plant.

**Criterion 2—Protection against environmental conditions, natural phenomena, and missiles.** a. Structures, systems, and components important to safety shall be designed to withstand the effects of and to be compatible with the plant environmental conditions associated with operation, maintenance, plant shutdown, testing, and accidents.

b. Structures, systems, and components important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, lightning, hurricanes, floods, tsunami, and seiches without impairing their capability to perform safety functions. The principal design criteria for these structures, systems, and components shall include: (1) Resistance to the most severe of the natural phenomena reported for the site and surrounding area, with appropriate modifications to take into account the limited quantity of the historical data and the period of time in which the data have been accumulated; (2) safety features to cope with combinations of the effects of accident conditions and the effects of natural phenomena; and (3) features which provide for safe shutdown under emergency conditions, confinement of radioactivity during the emergency, and safe startup following unscheduled shutdown.

c. Capability for determining the intensity of natural phenomena which may occur for comparison with design bases of structures, systems, and components important to safety shall be provided.

d. Structures, systems, and components shall be appropriately protected against dynamic effects, including seismic motion and the effects of missiles and discharging fluids, that may result from equipment failure and from other similar events and conditions both inside and outside the fuel reprocessing plant.

**Criterion 3—Protection against fires and explosions.** Structures, systems, and components important to safety shall be designed and located so as to continue to perform their safety functions effectively under fire and explosion exposure conditions. Noncombustible and heat-resistant materials shall be used wherever practical throughout the facility, particularly in locations vital to the functioning of confinement barriers and systems, to methods of controlling radioactive materials within the facility, and to the maintenance of safety control functions. Explosion and fire detection, alarm, and suppression systems shall be designed and provided with sufficient capacity and capability to minimize the adverse effects of fires and explosions on structures, systems, and components important to safety. The design of the fire suppression system shall include provisions to protect against adverse effects in the event of system operation or failure.

**Criterion 4—Sharing of structures, systems, and components.** Structures, systems, and components important to safety shall not be shared between a fuel reprocessing plant and plants of any type unless it is shown that such sharing will not impair the capability of the fuel reprocessing plant to perform its safety functions, including the capability for orderly and safe shutdown in

the event of an accident or incident.

**Criterion 5—Proximity of sites.** Fuel reprocessing plants located near other nuclear facilities and other activities licensed under this chapter shall be designed to assure that the cumulative effect of discharges resulting from their operation will not result in undue risk to the health and safety of the public.

**Criterion 6—Testing and maintenance of systems and components.** Systems and components that have safety-related functions shall be designed to permit inspection, maintenance, and testing to assure their continued functioning for the life of the facility.

**Criterion 7—Emergency capability.** Structures, systems, and components important to safety shall be designed to assure capability for safe shutdown of plant operations and handling of an emergency. The design shall assure capability for use, as necessary, of onsite facilities and available offsite facilities and services such as hospitals, fire and police departments, ambulance service, and utility personnel.

### PROTECTION BY MULTIPLE CONFINEMENT BARRIERS AND SYSTEMS

**Criterion 8—Confinement barriers and systems.** The total confinement system shall consist of one or more individual confinement barriers and systems which successively control against the release of radioactivity to the environment. The confinement system shall be designed to protect against the effects of accidents or external natural phenomena and shall be fabricated, erected, tested, and maintained to assure prevention of abnormal leakage, rapidly propagating failure, or gross rupture during the design life.

**Criterion 9—Ventilation and offgas systems.** The ventilation and offgas systems shall be designed and tested to assure the confinement of radioactive materials during normal or abnormal conditions. To accomplish this objective, these systems shall be designed to meet the following requirements:

a. The proper ventilating air flow direction shall be maintained across the confinement barrier, that is, between areas inside the barrier and areas outside the barrier, under operating and accident conditions.

b. The ventilation system shall accommodate changes in operating conditions such as variations in temperature or pressure and shall be capable of safely controlling all radioactive offgases that could be associated with normal or accident conditions.

c. The continuity of necessary ventilation shall be assured by means of redundant equipment, fail-safe control systems, or other provisions.

d. Provisions shall be made for testing all safety-related components during normal operation of the systems to demonstrate their ability to perform at design efficiency and to function during emergency conditions and during transitions between normal and emergency conditions.

e. Ventilation systems shall be designed to permit the continued occupancy of any and all areas where such occupancy is required for normal plant operations, for safe shutdown or maintaining the plant in a safe shutdown condition. The design shall include protection against the intake or accumulation of radioactive materials. The design shall also permit the timely and safe evacuation of personnel from all areas.

f. Vessel and dissolver offgas systems shall be designed to confine the radioactive materials during normal operation and to assure that the concentration of radioactive materials in the effluent gases is as low as practicable. Such systems shall also be designed to retain their confinement and separation capability to reduce releases resulting from an accident condition to levels consistent with the regulations contained in

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this chapter.

### PROCESS SAFETY FEATURES

**Criterion 10—Protection systems.** a. Protection systems shall be designed (1) to initiate action that will assure that specified acceptable operating design limits are not exceeded as a result of operational occurrences and (2) to sense potential hazardous or accident conditions and to activate systems and components required to assure the safety of operating personnel and the public or to give audible and visual alarm so that action can be taken in a timely manner to assure such safety. Protection systems and components shall be activated automatically where this mode is compatible with the safety requirements to be satisfied.

b. Protection systems shall have reliability and *in situ* testability. The design of protection systems shall provide for redundancy and independence at least sufficient to assure that (1) no single failure results in loss of the protection functions and (2) removal from service of any component does not result in loss of the required redundancy unless it can be otherwise demonstrated that the protection system will operate with acceptable reliability. The protection systems shall be designed to permit the periodic testing of its functions and efficiencies while the plant is in operation, to determine whether failures or losses of redundancy may have occurred.

c. Protection systems shall be designed to fail into a safe state or into a state demonstrated to be acceptable on some other defined basis if conditions such as disconnection of the system, loss of energy or motive power, or adverse environments are experienced.

**Criterion 11—Instrumentation and control systems.** Instrumentation and control systems shall be provided to monitor safety-related variables and operating systems over anticipated ranges for normal operation, for abnormal operation, for accident conditions, and for safe shutdown. These systems shall be provided with engineered safety features in the redundancy required to assure adequate safety of process and utility operations. The variables and systems that require constant surveillance and control include parts of the process, the overall confinement system, each confinement barrier and its associated systems, and other systems that affect the overall safety of the plant. Controls shall be provided to maintain these variables and systems within the prescribed operating ranges under all normal conditions. Instrumentation and control systems shall be designed to be fail safe or to assume a state demonstrated to be acceptable on some other basis if conditions such as disconnection, loss of energy or motive power, or adverse environments are experienced.

**Criterion 12—Separation of process safety features and control systems.** The process safety features shall be separated from control systems to the extent that a change or failure in either leaves intact a system which satisfies all reliability and independence requirements of the process safety systems.

**Criterion 13—Control room.** A control room or control areas shall be designed to permit occupancy and actions to be taken to operate the plant safely under normal conditions and to maintain the plant in a safe condition under accident or other abnormal conditions. Instrumentation and controls in the control room or control areas shall be designed with sufficient redundancy to allow the plant to be put into a safe condition if any one control room or control area is removed from service.

**Criterion 14—Process systems.** Process components and systems are the first confinement barrier. The design of each process system shall provide capability for the system to maintain its integrity and operability to protect the public health and safety under all normal process conditions and abnormal conditions, including the maximum expected in-

ventories of fissile materials and other radionuclides. Provisions shall be included for the safe handling of anticipated nonroutine process requirements.

**Criterion 15—Utility services.** a. The design of each utility service system required for emergency conditions shall provide for the meeting of safety demands under normal and abnormal conditions. The design of safety-related utility services and distribution shall include redundant systems to the extent necessary to maintain, with adequate capacity, the ability to perform safety functions assuming a single failure.

b. Emergency utility services shall be designed to permit testing of their functional operability and capacity, including the full operational sequence, of each system for transfer between normal and emergency supply sources, and the operation of associated safety systems.

c. Provisions shall be made so that, in the event of a loss of the primary electric power source or circuit, reliable and timely emergency power will be provided to instruments, confinement systems, utility service systems, and process systems in amounts sufficient to allow operations to be shut down safely and to be maintained in a safe shutdown condition with all safety devices essential to safe shutdown functioning. The onsite emergency power sources and the electrical distribution circuits shall have independence, redundancy, and testability to assure performance of their safety functions in the event of a single failure or an accident.

### NUCLEAR CRITICALITY SAFETY

**Criterion 16—Safety margins.** The design of process and storage systems shall include margins of safety for the nuclear criticality parameters that are commensurate with the uncertainties in the process and storage conditions, in the data and methods used in calculations, and in the nature of the immediate environment under accident conditions. All process and storage systems shall be designed to be maintained subcritical and to assure that no nuclear criticality accident can occur unless at least two unlikely, independent, and concurrent or sequential changes have occurred in the conditions essential to nuclear criticality safety.

**Criterion 17—Methods of control.** a. Favorable geometry, in which equipment or systems are subcritical by virtue of neutron leakage under worst credible conditions, is the preferred method of nuclear criticality control.

b. Where the favorable geometry method of nuclear criticality control is not practical, the use of permanently fixed neutron-absorbing materials (poisons) is the next preferred method of control.

c. Where both the favorable geometry and the permanently fixed neutron-absorbing materials (poisons) methods of nuclear criticality control are not practical, administrative controls of moderation, fissile material concentration, total fissile material, or the use of soluble neutron-absorbing materials (poisons) shall be employed when combined with margins of safety measurements or appropriate analysis and engineered safety features.

**Criterion 18—Neutron absorbers.** Where solid neutron-absorbing materials (poisons) are used for the prevention of nuclear criticality, the design shall provide for positive means to verify their continued efficacy. Soluble neutron-absorbing materials may be used as a primary nuclear criticality control provided: (1) two independent methods are provided to assure the presence of the required concentration of neutron absorber and (2) the equipment containing the fissile material is located behind sufficient barriers and shielding to reduce the probability and extent of accidental contamination of the environment and accidental radiation exposure to personnel in the event of a criticality accident.

**Criterion 19—Ancillary Criteria for Nuclear**

**Criticality Safety.** a. Process and storage systems shall be designed to assure that no mechanisms that could cause segregation of fissile materials can be present in components whose nuclear criticality safety is dependent on the homogeneous distribution of fissile material.

b. Components whose nuclear criticality safety is dependent on a limiting concentration of fissile material shall be designed so that either (1) mechanisms that could cause critical concentrations of fissile materials are not present or (2) concentration is controlled by positive instrumental means.

c. Process and storage systems shall be designed to assure that the transfer of fissile material from safe systems to unsafe systems is not possible as a consequence of any single failure or operating error.

d. Confinement system components shall be designed to assure that leakage from equipment or from one confinement zone to another confinement zone cannot result in a condition that would result in nuclear criticality.

e. The spacing between discrete accumulations of fissile materials shall be controlled so as to maintain a subcritical state.

### RADIOLOGICAL PROTECTION

**Criterion 20—Access control.** The design of the facility shall provide for control of access to the facility and to areas of potential contamination or high radiation within the facility. The facility shall be designed so that the spread of contamination can be monitored and controlled.

**Criterion 21—Radiation shielding.** Shielding shall be designed to assure that dose rates in accessible areas are consistent with the regulations contained in this chapter.

**Criterion 22—Radiation alarm systems.** Radiation alarm systems shall be provided to warn plant personnel of significant increases in radiation levels in normally accessible spaces and of excessive radioactivity released in plant effluents. Such systems shall be designed with redundancy and with capability to permit testing their efficiency of operation.

**Criterion 23—Effluent monitoring.** All plant effluent systems shall be designed to include means for measuring and recording the amount of radionuclides in any effluent. In order that the data thus measured and recorded can be used, the flow of environmental diluting media, either air or water, shall be determined.

**Criterion 24—Effluent control.** The design of the plant shall include means to control the release of radioactive effluents, whether gas, liquid, or solid, during normal operations and under accident conditions. Systems provided to guard against the release of radioactive materials shall be designed to be monitored and tested, and shall be provided with alarms. Capability shall be provided for prompt cessation of the flow of contaminated liquid effluents or for retention of such effluents as is necessary to assure that the concentrations of radioactive materials in liquid effluents are maintained as low as practicable.

### FUEL AND RADIOACTIVE WASTE STORAGE

**Criterion 25—Fuel and radioactive waste systems.** Fuel storage, radioactive waste storage, and other systems that might contain or handle radioactive materials shall be designed to assure adequate safety under normal and accident conditions. These systems shall be designed (1) with a capability to test components important to safety, (2) with suitable shielding for radiation protection under normal and accident conditions, (3) with confinement systems, and (4) with a heat removal capability having testability and reliability that reflects the importance to safety.

**Criterion 26—Waste disposal systems.** The waste disposal systems shall be designed so

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that their performance will comply with the regulations in this chapter.

### DECOMMISSIONING

**Criterion 27—Decommissioning.** In accordance with Appendix F, a design objective for fuel reprocessing plants shall be to facilitate decontamination and removal of all significant radioactive wastes at the time the facility is permanent decommissioned.

41 FR 56204

Published 12/27/76

Comment Period extended to 1/26/77

### [10 CFR Part 50]

#### LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

##### Periodic Updating of Final Safety Analysis Reports; Correction and Extension of Comment Period

On November 8, 1976, the Nuclear Regulatory Commission proposed for comment (41 FR 49123) amendments to its regulation, "Licensing of Production and Utilization Facilities," 10 CFR Part 50, which would require each applicant for or holder of a power reactor operating license which would be or was issued after January 1, 1963 to periodically submit to the Commission revised pages for the Final Safety Analysis Report (FSAR) that indicate changes made in the facility or the procedures for its operation and any analyses that are affected by these changes.

As indicated in the statement of considerations, the intent of the Commission was to apply the proposed rule to all power reactors licensed after January 1, 1963. However, the proposed rule was inadvertently limited in its applicability to those power reactors licensed pursuant to the provisions of § 50.22 of 10 CFR Part 50 when the actual intent was to include all power reactors even those licensed pursuant to § 50.21 as well.

Accordingly, in FR Doc. 76-32614, published on Monday, November 8, 1976, center column, page 49123, the third line of § 50.71 (e) is corrected to read as follows: "§ 50.21 or § 50.22, each applicant for or holder of".

In view of the fact that those power reactor licensees who received their operating licenses under the provisions of § 50.21 may not have realized that they would be subject to the proposed rule, it has been decided to extend the comment period to provide adequate time for comment. Accordingly, the comment period is hereby extended to January 26, 1977.

42 FR 14880

Published 3/17/77

Comment Period expires 5/16/77

Special Nuclear Material; Authority for Access to or Control

See Part 11 Proposed Rule Making.

42 FR 17134

Published 3/31/77

Comment Period expires 5/2/77

Partial effective rule published 7/18/77

### [10 CFR Part 50]

#### LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

##### Codes and Standards for Nuclear Power Plants

The Nuclear Regulatory Commission has under consideration amendments to its regulation, 10 CFR Part 50, "Licensing of Production and Utilization Facilities," which would incorporate by reference new addenda to specified published national codes and would clarify provisions in § 50.55a and Appendix G to Part 50.

On December 6, 1976, the Nuclear Regulatory Commission published in the FEDERAL REGISTER (41 FR 53333) an amendment to § 50.55a which provides that the editions of the referenced Codes and Addenda whose requirements must be met include those Addenda through the Summer 1975 Addenda.

Additional Addenda of the referenced ASME Boiler and Pressure Vessel Code have been issued through the Winter 1976 Addenda. The Commission proposes to amend § 50.55a to incorporate by reference the Addenda through the Winter 1976 Addenda to Section III, Division 1, "Rules for the Construction of Nuclear Power Plant Components," of the ASME Boiler and Pressure Vessel Code. The Winter 1975, Summer 1976, and Winter 1976 Addenda to Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the ASME Code are still being evaluated and are expected to be referenced with modifications in a subsequent amendment to the regulations. Until these addenda are incorporated by reference in the regulations, the Summer 1975 Addenda will continue to be the latest Addenda in effect in the regulations for Section XI of the ASME Code. Comments on Section XI of the Code will be considered after the Commission issues the proposed rule inviting comments on the subject.

Changes of a clarifying nature also are included in the proposed amendments to § 50.55a. The changes to footnote 4 and additions to paragraphs (g) (3) and (g) (4) are intended to make clear that references to codes in § 50.55a apply only to those editions of the codes and Addenda which have been reviewed by the Commission and have been incorporated by reference in paragraph (b) of that section.

A proposed amendment to Appendix G to Part 50 is included to clarify the requirements for the minimum metal temperature that must be maintained during reactor startup to assure an adequate margin against fracture of the closure flanges and adjacent head and shell regions that are stressed by the closure bolting. This amendment would not change present requirements as given in the 1974 Edition of Section III of the ASME Boiler and Pressure Vessel Code and incorporated by reference in Appendix G to 10 CFR Part 50. This amendment is necessary to retain the margin of safety against brittle fracture presently required because the Summer 1976 Addenda which would be incorporated by reference include a change in paragraph G 2222(c) of Appendix G to Sec-

tion III of the ASME Boiler and Pressure Vessel Code which would permit a decrease in the required margin of safety.

Pursuant to the Atomic Energy Act of 1964, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of Title 5 of the United States Code, notice is hereby given that adoption of the following amendments of 10 CFR Part 50 is contemplated. All interested persons who wish to submit written comments or suggestions in connection with the proposed amendments should send them to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch by May 2, 1977. Copies of comments received may be examined in the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C.

1. Section 50.55a is amended by deleting the phrases "in effect" and "in effect" wherever they appear except in paragraph (h) and substituting therefor the phrase "in effect"; by deleting the phrases "become effective" and "became effective" wherever they appear except in paragraph (g) (4) (v) and in paragraph (h) and substituting therefor the phrases "become effective" and "became effective", respectively; by deleting the language "set forth in Section XI of editions of the ASME Boiler and Pressure Vessel Code and Addenda" applied to in paragraphs (g) (3) (i) through (g) (3) (iv) and substituting therefor the language "set forth in editions of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda" in effect on the date when the editions of Section III of this Code and Addenda apply to; by deleting the phrase "and are incorporated by reference in paragraph (b) of this section," in the prefatory language of paragraph (g) (4); by deleting the phrase "no more than" in paragraph (g) (4) (i) through (g) (4) (iv) and adding the phrase "or may comply with later editions and addenda that become effective" at the end of these paragraphs; by revising paragraphs (b), and footnote 4 to read as follows:

##### § 50.55a Codes and standards.

Each operating license for a boiling or pressurized water-cooled nuclear power facility shall be subject to the conditions in paragraph (g) of this section and each construction permit for a utilization facility shall be subject to the following conditions in addition to those specified in § 50.55:

(b) As used in this section, references<sup>1</sup> to editions of Criteria, Codes and Standards include only those editions through 1974; references<sup>1</sup> to Addenda include only those Addenda through the Summer 1975 Addenda, except references<sup>1</sup> to Addenda of Section III, Division 1, of the ASME Boiler and Pressure Vessel Code include those Addenda through the Winter 1976 Addenda.

<sup>1</sup> These incorporation by reference provisions were approved by the Director of the FEDERAL REGISTER on March 17, 1972 and May 4, 1973.



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\*For purposes of paragraphs (a) through (g) and paragraphs (i) and (j) of this section, ASME code editions and addenda are considered to be "in effect" or "effective" after they are incorporated by reference in paragraph (b) of this section.

2. In 10 CFR Part 50, Appendix G is amended by adding a new paragraph IV.A.2.e. to read as follows:

#### IV. FRACTURE TOUGHNESS REQUIREMENTS

##### A. . . .

##### 1. . . .

3. For vessels, exclusive of bolting or other fasteners:

e. When the flanges and adjacent head and shell regions of vessels are stressed by the full intended bolt preload and by pressure not exceeding 20% of the preoperational system hydrostatic test pressure, minimal metal temperature in the stressed region should be at least 60° F. above the RT<sub>NDT</sub> temperature for the material in the stressed region, considering its initial RT<sub>NDT</sub> temperature, plus the effect of irradiation at the stressed region, if any.

43 FR 10370

Published 3/13/78

Comment period expires 5/15/78

(extended to 7/15/78)

### [10 CFR Parts 30, 40, 50, and 70]

## DECOMMISSIONING CRITERIA FOR NUCLEAR FACILITIES

### Advance Notice of Proposed Rulemaking

AGENCY: U.S. Nuclear Regulatory Commission.

ACTION: Advance Notice of Proposed Rulemaking.

SUMMARY: The U.S. Nuclear Regulatory Commission has underway extensive studies intended to provide a data base for developing decommissioning criteria for nuclear facilities. The Commission is considering amending its regulations to provide more specific guidance on decommissioning criteria for production and utilization facility licensees and byproduct, source, and special nuclear material licensees. This notice is to invite advice and recommendations on several questions concerning decommissioning nuclear facilities.

DATES: Comment period expires May 15, 1978.

ADDRESSES: Interested persons are invited to submit written comments and suggestions to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments received by the Commission may be examined in the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C.

FOR FURTHER INFORMATION CONTACT:

Mr. Robert M. Bernero, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301-443-3573).

#### SUPPLEMENTARY INFORMATION:

Present requirements and practices relating to the decommissioning of nuclear facilities are addressed in guides and regulations of the U.S. Nuclear Regulatory Commission. Section 50.33(f) of Title 10, Code of Federal Regulations requires the Nuclear Regulatory Commission (NRC) to determine, prior to the issuance of a license, that an applicant for an operating license is financially qualified to permanently shut down his facility and maintain it in a safe condition. Section 50.82 of Part 50 specifies requirements concerning termination of facility licenses. NRC Regulatory Guide 1.86 describes methods and procedures acceptable to the NRC staff for the termination of operating licenses for reactors. The guide specifies limits which must be met before buildings, structures, and equipment, etc., can be released on an unrestricted basis. The guide also discusses alternatives for reactor retirement, i.e., (1) mothballing, (2) in-place entombment, (3) removal of radioactive components and dismantling, and (4) conversion to a new nuclear system or a fossil fuel system.

Appendix F of Part 50 was amended in 1971 to require an applicant for certain licenses to provide information to enable the Commission to determine whether the applicant is financially qualified to provide for the removal and disposal of radioactive waste. Appendix F also states that a design objective of a fuel reprocessing plant shall be to facilitate decontamination and that the Commission will develop criteria for the extent of decontamination to be required upon decommissioning in consultation with competent groups.

Regulatory Guides dealing with the content and format of applications and environmental reports for uranium mill licenses presently request information on tailings stabilization and associated financial arrangements for assuring that tailings are stabilized. Also, a generic environmental impact statement (EIS) on uranium milling is under preparation. One primary objective of the EIS is to provide an information base for a rulemaking action covering the decommissioning and long-term disposition of mill tailings.

Several enriched uranium fuel fabrication facilities have, in the past, ceased operations. These plants generally have been decontaminated to below limits essentially the same as those specified in Regulatory Guide 1.86. The same holds true for other locations where byproduct, source, and special nuclear material have been used.

In 1975, the NRC initiated studies at Battelle-PNL to provide an information base for developing decommissioning

criteria and guidelines for light water reactors and their fuel cycle facilities. These studies will also include waste burial grounds. The studies will evaluate the technology, costs, and the environmental impact (both occupational and public) related to decommissioning. These studies have led to a final report on decommissioning a fuel reprocessing plant in October 1977. A final report on decommissioning a pressurized water reactor is scheduled for May 1978. Other reports are scheduled over the next two years to complete these studies.

In a petition dated July 5, 1977, as supplemented October 7, 1977, the Public Interest Research Group, and others, requested the Commission to initiate rulemaking to promulgate regulations for nuclear power plant decommissioning. The regulations requested by the petitioners would require plant operators to post bonds to be held in escrow, prior to each plant's operations, to ensure that funds will be available for proper and adequate isolation of radioactive material upon each plant's decommissioning. The petitioners state that the regulations should also require that nuclear power plants already in operation establish plans and immediately post bonds, to be held in escrow, to ensure proper decommissioning. The petitioners argue that this arrangement will ensure that the cost of decommissioning is paid for by current beneficiaries and not by future generations.

The Commission is considering development of a more explicit overall policy for decommissioning nuclear facilities and amending its regulations in 10 CFR Parts 30, 40, 50 and 70 to include more specific guidance on decommissioning criteria for production and utilization facility licensees and byproduct, source, and special nuclear material licensees. It is anticipated that the issue raised in the PIRG petition discussed above will be processed separately from the overall policy development. Advice and recommendations on the matter of overall policy development are invited from all interested persons. Specifically, comments are requested on the following questions.

1. Is it desirable to develop more definitive decommissioning criteria for production and utilization facility licensees and byproduct, source, and special nuclear material licensees? If so, should the criteria be in the form of:

A. Potential exposures to individuals;

B. Numerical contamination limits;

C. Other? (Specify)

2. Should detailed decommissioning plans be required prior to the issuance of licenses?

3. Should funding or other surety arrangements be required before the issuance of licenses for all cases? If not, which cases?

4. What are acceptable criteria for residual levels of radioactivity on ma-

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terials which can be released for unrestricted use?

5. Proposals have been made to maintain reactors, which have been closed, in protective storage for lengthy periods of time to allow for radioactive decay prior to dismantlement. From the standpoint of determining the impact to future generations, what is an acceptable length of time, if any, after a facility operation ceases before the facility should be decommissioned?

6. Should decommissioning criteria extend to buildings, structures, and components which have not been contaminated with radioactive materials?

The Commission has concluded that action to include specific decommissioning criteria and guidelines in its regulations for production and utilization facility licensees and byproduct, source, and special nuclear material licensees would constitute a major Federal action significantly affecting the quality of the human environment and as such will require the preparation of an environmental impact statement pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA). Accordingly, an impact statement(s) will be prepared should the Commission determine it is in the public interest to proceed to amend its regulations as described above.

43 FR 19053

Published 5/3/78

Comment period extended to 7/15/78

[10 CFR Parts 30, 40, 50 and 70]

### DECOMMISSIONING CRITERIA FOR NUCLEAR FACILITIES

#### Extension of Comment Period

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Extension of comment period on advance notice of proposed rulemaking.

**SUMMARY:** On March 13, 1978, the U.S. Nuclear Regulatory Commission published an advance notice of proposed rulemaking relating the development of decommissioning criteria for nuclear facilities. The Commission has been requested to extend the comment period of the advance notice in order to provide more time to submit public comments. This notice extends the comment period of the March 13, 1978 notice.

**DATES:** Comment period expires July 15, 1978.

**ADDRESSES:** Interested persons are invited to submit written comments and suggestions to the Secretary of

the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments received by the Commission may be examined in the Commission's Public Document Room at 1717 H Street NW., Washington, D.C.

#### FOR FURTHER INFORMATION CONTACT:

Mr. Robert M. Bernero, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington D.C. 20555, phone 301-443-3573.

**SUPPLEMENTARY INFORMATION:** On March 13, 1978, the Nuclear Regulatory Commission published in the **FEDERAL REGISTER** (43 FR 10370) an advance notice of proposed rulemaking to invite advice and recommendations on several questions concerning decommissioning nuclear facilities.

In the notice, the Commission explained present requirements and practices relating to the decommissioning of nuclear facilities. The Commission further described ongoing studies at the Battelle Pacific Northwest laboratory to provide bases for the reevaluation and development of decommissioning criteria and guidelines for light water reactors and their supporting fuel cycle facilities. Comments were requested on several specific issues and questions in order to invite advice and recommendations on the matter of overall decommissioning policy development. Interested persons were invited to submit comments on the notice by May 15, 1978.

In view of a request for additional comment time from Debevoise & Liberman on behalf of Arkansas Power & Light Co., Dallas Power & Light Co., Jersey Central Power & Light Co., Metropolitan Edison Co., Pacific Gas & Electric Co., Pennsylvania Electric Co., Southern California Edison Co., Texas Electric Service Co., Texas Power & Light Co., Texas Utilities Generating Co., Virginia Electric & Power Co., and Yankee Atomic Electric Co., the Commission is hereby extending the time for submitting written comments or suggestions concerning the notice to July 15, 1978. Any written submissions should be sent to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch.

43 FR 22365

Published 5/25/78

Comment period expires 7/24/78  
(extended to 12/21/78)

*Safeguards on Nuclear Material—Implementation of US/IAEA Agreement*

See Part 75 Proposed Rule Making.

43 FR 22373

Published 5/25/78

Comment period expires 7/24/78

[10 CFR Part 50]

### LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

#### Generic Issue of Financial Qualification

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Initiation of rulemaking.

**SUMMARY:** Notice is hereby given that the Nuclear Regulatory Commission has instructed the staff to initiate a rulemaking proceeding with respect to the requirement for demonstrating financial qualifications to obtain Part 50 licenses for production and utilization facilities. The staff intends to consider the factual, legal and policy aspects of the financial qualifications issue, as well as the adequacy of the present rules and practices involved.

**DATE:** Comments are due on or before July 24, 1978.

**ADDRESS:** Send comments to the Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

#### FOR FURTHER INFORMATION CONTACT:

Mr. Donald Skovholt, 301-492-7492.

**SUPPLEMENTARY INFORMATION:** The staff wishes to receive comments regarding this issue from interested parties. These comments should address the aspects identified above and include any suggestions for specific changes to the rules.

Following receipt of all such comments and suggestions in response to this notice, the staff will evaluate them and determine whether, in the view of the staff, changes to the rules are desirable. If considered desirable, the staff would then recommend initiation of appropriate further rulemaking proceedings.

All interested persons who desire to submit written comments or suggestions should send their comments to the Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, on or before July 24, 1978.

43 FR 37473

Published 8/23/78

Comment period expires 10/10/78  
(extended to 11/24/78)

[10 CFR Part 50]

### APPENDIX E—EMERGENCY PLANS FOR PRODUCTION AND UTILIZATION FACILITIES

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Proposed rule.

**SUMMARY:** A major objective of the Nuclear Regulatory Commission is to



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assure that emergency plans exist which provide reasonable assurance that appropriate measures can and will be taken in the event of an accidental release of radioactive material from a nuclear power plant. The Commission is proposing to amend its regulation on emergency plans for production and utilization facilities to address emergency planning considerations that may extend to areas outside the low population zone (LPZ).

**DATES:** Comments should be submitted on or before October 10, 1978.

**ADDRESSES:** Written comments or suggestions concerning the proposed amendment should be submitted to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Attention: Docketing and Service Branch. Copies of comments received may be examined at the Commission's Public Document Room, 1717 H Street NW., Washington, D.C.

### FOR FURTHER INFORMATION CONTACT:

Mr. Michael T. Jamgochian, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, 301-443-5981.

**SUPPLEMENTARY INFORMATION:** A major objective of the Commission is to assure that emergency plans exist which provide reasonable assurance that appropriate measures can and will be taken in the event of an accidental release of radioactive material from a nuclear power plant.

The intent of the Commission is to assure that the decisionmaking process for licensing nuclear power plants will include an analysis by the applicant and a review by the Commission of each nuclear power plant license or permit application to plan for taking suitable protective actions on a timely basis under accident conditions within and outside the proposed site. Suitable protective actions would include measures which could mitigate radiation exposure to the public from the facility or from radioactive material released to the environs. Immediate emergency protective measures could include evacuation of the public from the area of the public taking protective shelter until the danger had passed.

The principal aspects of the NRC staff review for emergency planning includes the protections of persons within the exclusion area, the onsite emergency response organization, the protection of the public beyond the exclusion area and the connection between the facilities plan and that of the offsite emergency response organization consisting of local, State and Federal agencies. These reviews are part of the safety review of each application. These matters may also be considered in identifying any potential emergency planning advantages or disadvantages of particular sites as part

of the NEPA cost/benefit analysis of alternate sites.

There are two elements of the NRC staff review required by the Commission's regulations as stated in 10 CFR Part 100, "Reactor Site Criteria," and 10 CFR Part 50, "Licensing of Production and Utilization Facilities." The first review element is to determine compliance with the siting criteria of 10 CFR Part 100. Reactor site criteria are established in part 100 which, in conjunction with postulated accident calculations performed by the applicant for the proposed facility design, establish boundaries for an exclusion area and a low population zone (LPZ). In this connection, the Commission has, from the earliest days of licensing reactors, required the use of conservative assumptions and calculational methods in assessing consequences of a hypothetical release from the nuclear facility. The review conducted in conformance with 10 CFR Part 100 requirements establishes, for an acceptable site, that certain numerical exposure guidelines are met and in addition that the number and density of people within the LPZ are such that appropriate protective measures could be taken on their behalf in the event of an accident.

Beyond the siting criteria and the question of site suitability is the second review element which is to determine compliance with the licensing requirements in 10 CFR Part 50 and appendix E thereto for emergency plans. This review element focuses on the question of organizational and operational preparedness to cope with emergencies. A principal aspect of this review is to determine whether the applicant has made or will make appropriate arrangements with appropriate Federal, State and local officials to assure that, in the event of an actual emergency, necessary evacuation or other protective actions will be taken to protect offsite members of the public. Although these arrangements include the protective measures contemplated by 10 CFR Part 100, in connection with the LPZ, they need not be limited to application within the LPZ, nor to measures intended to cope primarily with the airborne pathway (cloud passage) covered by sections 100.3 and 100.11 of part 100. Such arrangements are expected to be guided by emergency action criteria, arrived at through a coordinated effort among local, State, and Federal authorities. Such criteria are believed to be a sound and prudent approach to the management of the small residual risk involved in the operation of nuclear facilities.

Indeed, their application to ingestion exposure pathways involving accidental spills into drinking water sources and accidental deposition of radioactive material onto agricultural crops or areas used for forage for milk cows has long been included as part of the review of emergency plans. Since

one would anticipate that there would generally be time to monitor the actual situation for releases impacting from these pathways and to take appropriate action based on existing conditions, the Commission review has generally not emphasized postulated accident scenarios for evaluation but rather has assured that there are adequate arrangements for prompt notice to appropriate officials and arrangements to perform the appropriate monitoring, even though this may involve areas of consideration extending beyond the LPZ.

The principal considerations used in assessing emergency plans during the siting and licensing review of nuclear power plants including the need for such planning beyond the LPZ are summarized below.

1. *Physical characteristics.*—The Commission considers that the following physical characteristics in the vicinity of the site are relevant to the evaluation of protective actions which may be taken in the event of an accidental release of radioactive material: The numbers and proximity to the site boundary of resident and transient persons and the relative speed with which warnings can be communicated to them, the availability and character of evacuation routes and means of transportation, the availability and locations of structures suitable for sheltering people, and the presence of institutions (such as hospitals, nursing homes, and schools) which may require special emergency planning arrangements. Measures to compensate for those characteristics that may be adverse to the effective implementation of emergency actions should be identified and proposed by an applicant and reviewed by the NRC staff. Particular attention is to be given to the foregoing as they affect the effectiveness of taking protective actions within the LPZ established pursuant to the Commission's siting criteria of 10 CFR Part 100. This should not, however, preclude the consideration of utilizing emergency plans to provide additional protective benefit to persons beyond a LPZ as a matter of reasonable and prudent risk management, to assure protection beyond that afforded by safety design features and the siting of facilities in accordance with 10 CFR Part 100.

2. *Protective measures.*—An essential element for reducing individual and population exposures from accidental releases of radioactive material is effective and timely protective measures. The establishment of soundly based emergency plans which include appropriate protective measures to the initial operation of a nuclear power plant is a basic Commission requirement in its licensing process.

The NRC staff has found that there may be circumstances for which the available strategies for taking protective actions outside the facility site



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by following the methods of analysis and the required margins of safety of Appendix G of the ASME Code<sup>1</sup> supplemented by the requirements of Section V of this Appendix. In addition, when pressure exceeds 20 percent of the preservice system hydrostatic test pressure, the temperature of the stressed regions of nozzles, flanges and other structural discontinuities shall be at least 150° F above (83 C above) the reference temperature of the material in those regions unless a lower temperature can be justified by showing that the margins of safety for those regions are equivalent to those required for the beltline when it is controlling. The justification submitted for the pressure temperature limits shall describe the methods of analysis used.

3. When the core is critical (other than for the purpose of low-level physics tests) the temperature of the reactor vessel shall not be lower than 40° F above (22 C above) the minimum permissible temperature of paragraph 2. of this section nor lower than the minimum permissible temperature for the inservice system hydrostatic pressure test. An exception may be made for boiling water reactor vessels when water level is within the normal range for power operation and the pressure is less than 20 percent of the preservice system hydrostatic test pressure, in which case the minimum permissible temperature is 60° F above (33 C above) the reference temperature of the closure flange regions that are highly stressed by the bolt preload.

4. If there is no fuel in the reactor during system pressure tests or leak tests, the minimum permissible test temperature shall be  $RT_{\text{ref}} + 60^\circ \text{F}$  ( $RT_{\text{ref}} + 33^\circ \text{C}$ ).

5. If there is fuel in the reactor during system pressure tests or leak tests, the requirements of paragraphs 2 or 3 shall apply, depending on whether the core is critical during the test.

B. Reactor vessels for which the predicted value of upper shelf energy at end of life is below 50 ft lb or the predicted value of adjusted reference temperature at end of life exceeds 200° F (93 C) shall be designed to permit a thermal annealing treatment to recover material toughness properties of ferritic materials of the reactor vessel beltline.

### V. Inservice Requirements—Reactor Vessel Beltline Material

A. The effects of neutron radiation on the reference temperature and upper-shelf energy of reactor vessel beltline materials, including welds, shall be predicted from the results of pertinent radiation effects studies in addition to the results of the surveillance program of Appendix H.

B. Reactor vessels may continue to be operated only for that service period within which the requirements of Section IV are satisfied using the predicted value of the adjusted reference temperature and the predicted value of the upper-shelf energy at the end of the service period to account for the effects of radiation on the fracture toughness of the beltline materials. These predictions shall be made for the radiation conditions at the tip of the assumed flaw at its deepest part. The highest adjusted reference temperature and the lowest upper-shelf energy level of all the beltline materials

shall be used to verify that the fracture toughness requirements are satisfied.

C. In the event that the requirements of Section V.B. cannot be satisfied, reactor vessels may continue to be operated provided all of the following requirements are satisfied:

1. A volumetric examination of the beltline materials that do not satisfy the requirements of Section V.B. including 100 percent of any associated welds shall be made and any flaws evaluated according to Section XI of the ASME Code and as otherwise specified by the Director of Nuclear Reactor Regulation.

2. Additional evidence of the fracture toughness of the beltline materials after exposure to neutron irradiation shall be obtained from results of supplemental fracture toughness tests.

3. An analysis shall be performed that conservatively demonstrates, making appropriate allowances for all uncertainties, the existence of equivalent margins of safety for continued operation.

D. If the procedures of section V.C. do not indicate the existence of an equivalent safety margin, the reactor vessel beltline may, subject to the approval of the Director of Nuclear Reactor Regulation, be given a thermal annealing treatment to recover the fracture toughness of the material. The degree of recovery shall be measured by testing additional specimens that have been withdrawn from the surveillance program capsules and that have been annealed under the same time-at-temperature conditions as those given the beltline material. The results shall provide the basis for establishing the adjusted reference temperature and upper shelf energy after annealing. The reactor vessel may continue to be operated only for that service period within which the predicted fracture toughness of the beltline region materials satisfies the requirements of Section IV.A. using the values of adjusted reference temperature and upper-shelf energy that include the effects of annealing and subsequent irradiation.

E. The proposed programs for satisfying the requirements of Sections V.C. and V.D. shall be reported to the Director of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, for review and approval on an individual case basis at least 3 years prior to the date when the predicted fracture toughness levels will no longer satisfy the requirements of Section V.B.

### Appendix H—Reactor Vessel Material Surveillance Program Requirements

#### Table of Contents

- I. Introduction
- II. Surveillance Program Criteria
- III. Report of Test Results
- I. Introduction

The purpose of the material surveillance program required by this appendix is to monitor changes in the fracture toughness properties of ferritic materials in the reactor vessel beltline region of light water nuclear power reactors resulting from their exposure to neutron irradiation and the thermal environment. Under this program, fracture toughness test data are obtained from material specimens exposed in surveillance capsules, which are withdrawn periodically

from the reactor vessel. These data will be used as described in Sections IV and V of Appendix G.

### II. Surveillance Program Criteria

A. No material surveillance program is required for reactor vessels for which it can be conservatively demonstrated by analytical methods applied to experimental data and tests performed on comparable vessels, making appropriate allowances for all uncertainties in the measurements, that the peak neutron fluence ( $E > 1 \text{ MeV}$ ) at the end of the design life of the vessel will not exceed  $10^{17} \text{ n/cm}^2$ .

B. Reactor vessels that do not meet the conditions of paragraph II.A. shall have their beltline materials monitored by a surveillance program complying with ASTM E 185,<sup>1</sup> except as modified by this Appendix. ASTM E 185 was approved for incorporation by reference by the Director of the Federal Register, on May 29, 1973.

1. That part of the surveillance program conducted prior to the first capsule withdrawal shall meet the requirements of the edition of ASTM E 185 that is current on the issue date of the ASME Code to which the reactor vessel was purchased. For each capsule withdrawal, the test procedures and reporting requirements shall meet the requirements of the edition of E 185 in effect on the date of capsule withdrawal, to the extent practical for the configuration of the specimens in the capsule. For any part of the surveillance program, later editions of E 185 may be used instead of the editions previously specified, but including only those editions through 1979.

2. Surveillance specimen capsules shall be located near the inside vessel wall in the beltline region, so that the specimen irradiation history duplicates to the extent practicable, within the physical constraints of the system, the neutron spectrum, temperature history, and maximum neutron fluence experienced by the reactor vessel inner surface. If the capsule holders are attached to the vessel wall or to the vessel cladding, construction and inservice inspection of the attachments and attachment welds shall be done according to the requirements for permanent structural attachments to reactor vessels given in the ASME Code, Sections III and XI. The design and location of the capsules shall permit insertion of replacement capsules. Accelerated irradiation capsules may be used in addition to the required number of surveillance capsules specified in ASTM E 185.

3. Proposed withdrawal schedules shall be submitted with a technical justification therefor to the Director of Nuclear Reactor Regulation for approval. The proposed schedule shall not be implemented without prior approval.

C. An integrated surveillance program may be considered for a set of reactors that have similar design and operating features. The

<sup>1</sup> Standard Recommended Practice for Surveillance Tests for Light Water Cooled Nuclear Power Reactor Vessels. Copies may be obtained from the American Society for Testing and Materials, 1916 Race St., Philadelphia, Pa. 19103. Copies will be available for inspection at the Commission's Public Document Room, 1717 H St., NW., Washington, D.C.

\* Amended 45 FR 77450

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representative materials chosen for surveillance from each reactor in the set may be irradiated in one or more of the reactors, but there must be an adequate dosimetry program for each reactor. No reduction in the requirements for number of materials to be irradiated, specimen types, or number of specimens per reactor is permitted, but the amount of testing may be reduced if the initial results agree with predictions.

Integrated surveillance programs must be approved by the Director of Nuclear Reactor Regulation on a case-by-case basis. Criteria

for approval include the following considerations:

1. The design and operating features of the reactors in the set shall be sufficiently similar to permit accurate comparisons of the predicted amount of radiation damage as a function of total power output.

2. There shall be adequate arrangements for data sharing between plants.

3. There shall be a contingency plan to assure that the surveillance program for each reactor will not be jeopardized by operation at reduced power level or by an extended outage of another reactor from which data are expected.

4. There shall be substantial advantages to be gained in reduced power outages or personnel exposure to radiation, achieved by not requiring surveillance capsules in all reactors in the set.

### III. Report of Test Results

A. Each capsule withdrawal and the results of the fracture toughness tests shall be the subject of a summary technical report to be submitted for approval to the Director of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, within 90 days after completion of testing. The Director shall be notified at least 30 days in advance of the capsule withdrawal, giving the expected date of completion of testing and submittal of report.

B. The report shall include the data required by ASTM E 185, as required by paragraph II.B.1, and the results of all fracture toughness tests conducted on the beltline materials in the irradiated and unirradiated conditions.

C. If a change in the operating pressure-temperature limits given in the Technical Specifications is required, the revised limits shall be submitted with the report, including any changes made in operating procedures required to meet the limits.



## PART 70 • DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

### LICENSE APPLICATIONS

#### § 70.21 Filing.

(a) Applications for licenses should be filed in sextuplicate, provided that 25 copies of an application for a license to possess and use special nuclear material in a plutonium processing and fuel fabrication plant shall be filed with the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

Applications may be filed in person at the Commission's offices at 1717 H Street NW., Washington, D.C., or 7920 Norfolk Avenue, Bethesda, Md. Information contained in previous applications, statements or reports filed with the Commission may be incorporated by reference, provided that such references are clear and specific.

(b) An application for license filed pursuant to the regulations in this part will be considered also as an application for licenses authorizing other activities for which licenses are required by the Act, provided the application specifies the additional activities for which licenses are requested and complies with regulations of the Commission as to applications for such licenses.

(c) Any application which contains Restricted Data shall be prepared in such manner that all Restricted Data are separated from the unclassified information.

(d) Applications and documents submitted to the Commission in connection with applications may be made available for public inspection in accordance with the provisions of the regulations contained in Part 2 of this chapter.

(e) Each application for a special nuclear material license, other than a license exempted from Part 170 of this chapter, shall be accompanied by the fee prescribed in § 170.31 of this chapter. No fee will be required to accompany an application for renewal or amendment of a license, except as provided in § 170.31 of this chapter.

(f) An application for a license to possess and use special nuclear material for processing and fuel fabrication, scrap recovery or conversion of uranium hexafluoride, commercial waste disposal by land burial or for the conduct of any other activity which the Commission determines will significantly affect the quality of the environment shall be filed at least 9 months prior to commencement of construction of the plant or facility in which the activity will be conducted, and shall be accompanied by an Environmental Report required under Part 51\*\*\* of this chapter.

(g) An applicant for a license to possess and use more than one effective kilogram of special nuclear material should file with the Commission the installation information described in § 75.11 of this chapter; and the applicant shall permit verification thereof by the International Atomic Energy Agency and take such other action as may be necessary to implement the US/IAEA Safeguards Agreement, in the manner set forth in §§ 75.6 and 75.11-75.14 of this chapter. The Commission will grant an exemption from the requirements of this paragraph, upon application, if it determines that the installation will not be included on the United States eligible list. The installation information should be filed at least 9 months prior to the date when the applicant desires to receive the special nuclear material (or earlier upon request by the Commission). Applicants who desire to receive the special nuclear material within 9 months after the effective date of this paragraph should submit the installation information as soon as possible.

#### § 70.22 Contents of applications\*\*

(a) Each application for a license\* shall contain the following information:

(1) The full name, address, age (if an individual), and citizenship of the applicant and the names and addresses of three personal references. If the applicant is a corporation or other entity, it shall indicate the State where it was incorporated or organized, the location of the principal office, the names, addresses, and citizenship of its principal officers, and shall include information known to the applicant concerning the control or ownership, if any, exercised over the applicant by any alien, foreign corporation, or foreign government.

(2) The activity for which the special nuclear material is requested, or in which special nuclear material will be produced, the place at which the activity is to be performed and the general plan for carrying out the activity.

(3) The period of time for which the license is requested;

(4) The name, amount, and specifications (including the chemical and physical form and, where applicable, isotopic content) of the special nuclear material the applicant proposes to use or produce;

(5) [Deleted 32 FR 4055.]

(6) The technical qualifications, including training and experience of the applicant and members of his staff to engage in the proposed activities in accordance with the regulations in this chapter.

(7) A description of equipment and facilities which will be used by the applicant to protect health and minimize danger to life or property (such as handling devices, working areas, shields, measuring and monitoring instruments, devices for the disposal of radioactive effluents and wastes, storage facilities, criticality accident alarm systems, etc.).

(8) Proposed procedures to protect health and minimize danger to life or property (such as procedures to avoid accidental criticality, procedures for personnel monitoring and waste disposal, post-criticality accident emergency procedures, etc.).

NOTE: Where the nature of the proposed activities is such as to require consideration of the applicant's financial

\*Sources generally licensed under this section prior to January 19, 1975 may bear labels authorized by the regulations in effect on January 1, 1975.

\*\*\*Amended 39 FR 26279.

\*\*Amended 39 FR 37765.

## PART 70 • DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

qualifications to engage in the proposed activity in accordance with the regulations in this chapter, the Commission may request the applicant to submit information with respect to his training and qualifications.

(b) Each application for a license to possess, at any one time, and location special nuclear material in a quantity exceeding one effective kilogram of special nuclear material and to use such special nuclear material except those uses involved in the operation of a nuclear reactor licensed pursuant to Part 50 of this chapter and those involved in a waste disposal operation, and as sealed sources, shall contain a full description of the applicant's program for control of and accounting for special nuclear material which will be in his possession under license, to show how compliance with the requirements of § 70.58 will be accomplished.

(c) [Deleted 43 FR 6915.]

(d) The Commission may at any time after the filing of the original application and before the expiration of the license, require further statements in order to enable the Commission to determine whether the application should be granted or denied or whether a license should be modified or revoked. All applications and statements shall be signed by the applicant or licensee or a corporate officer thereof.

(e) Each application and statement shall contain complete and accurate disclosure as to all matters and things required to be disclosed.

(f) Each application for a license to possess and use special nuclear material in a plutonium processing and fuel fabrication plant shall contain, in addition to the other information required by this section, a description of the plant site, a description and safety assessment of the design bases of the principal structure, systems, and components of the plant, including provisions for protection against natural phenomena, and a description of the quality assurance program to be applied to the design, fabrication, construction, testing and operation of the structures, systems, and components of the plant.<sup>2</sup>

(g) Each application for a license that would authorize the transport or delivery to a carrier for transport of special nuclear material in an amount specified in § 73.1(b)(2) of this chapter shall include (1) a description of the plan for physical protection of special nuclear material in transit in accordance with §§ 73.20, 73.25, 73.26, 73.27, 73.67 (a) and (e), 73.67(g) for 10 kg or more of special nuclear material of low strategic significance, and 73.70(g) of this chapter including, as appropriate, a plan for the selection, qualification and training of armed escorts, or the specification and design of a specially designed truck or trailer, and (2) a licensee safeguards contingency plan or response procedures, as appropriate, for dealing

with threats, thefts, and industrial sabotage relating to the special nuclear material in transit. Each application for such a license involving formula quantities of strategic special nuclear material shall include the first four categories of information contained in the applicant's safeguards contingency plan. (The first four categories of information, as set forth in Appendix C to 10 CFR Part 73, are Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix. The fifth category of information, Procedures, does not have to be submitted for approval.)

(h) Each application for a license to possess or use at any site or contiguous sites subject to control by the licensee uranium-235 (contained in uranium enriched to 20 percent or more in the uranium-235 isotope), uranium-233, or plutonium alone or in any combination in a quantity of 5,000 grams or more computed by the formula,  $\text{grams} = (\text{grams contained U-235}) + 2.5 (\text{grams U-233} + \text{grams plutonium})$ , other than a license for possession or use of such material in the operation of a nuclear reactor licensed pursuant to Part 50 of this chapter, shall include a physical security plan, consisting of two parts. Part I shall address vital equipment, vital areas, and isolation zones, and shall demonstrate how the applicant plans to meet the requirements of §§ 73.20, 73.40, 73.45, 73.46, 73.50, 73.60, 73.70, and 73.71 of this chapter in the conduct of the activity to be licensed including the identification and description of jobs as required by § 11.11(a) of Part 11 of this chapter. Part II shall list tests, inspections, and other means to demonstrate compliance with such requirements.

(i) Each application for a license to possess and use special nuclear material for processing and fuel fabrication, scrap recovery, or conversion of uranium hexafluoride shall contain, in addition to the other information required by this section, plans for coping with emergencies.<sup>4</sup>

(j) Each application for a license to possess or use at any site or contiguous sites subject to control by the licensee uranium-235 (contained in uranium enriched to 20 percent or more in the uranium-235 isotope), uranium-233, or plutonium alone or in any combination in a quantity of 5,000 grams or more computed by the formula,  $\text{grams} = (\text{grams contained U-235}) + 2.5 (\text{grams U-233} + \text{grams plutonium})$  other than a license for possession or use of such material in the operation of a nuclear reactor licensed pursuant to Part 50 of this chapter, shall include a licensee safeguards contingency plan for dealing with threats,

thefts, and industrial sabotage, as defined in Part 73, relating to nuclear facilities licensed under Part 50 or to the possession of special nuclear material licensed under Part 70 of this chapter. Each application for such a license shall include the first four categories of information contained in the applicant's safeguards contingency plan. (The first four categories of information, as set forth in Appendix C to 10 CFR Part 73, are Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix. The fifth category of information, Procedures, does not have to be submitted for approval.)

(k) Each application for a license to possess or use at any site or contiguous sites subject to control by the licensee special nuclear material of moderate strategic significance or 10 kg or more of special nuclear material of low strategic significance as defined under paragraphs 73.2 (x) and (y) of this chapter, other than a license for possession or use of such material in the operation of a nuclear power reactor licensed pursuant to Part 50 of this chapter, shall include a physical security plan which shall demonstrate how the applicant plans to meet the requirements of paragraph 73.67 (d), (e), (f) and (g), as appropriate, of Part 73 of this chapter.

<sup>2</sup>The description of the quality assurance program should include a discussion of how the criteria in Appendix B of Part 50 of this chapter will be met.

\*Amended 43 FR 14007.

<sup>4</sup>Emergency plans shall contain the elements that are listed in Section IV, "Content of Emergency Plans," of Appendix E to Part 80 of this Chapter.

UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

**PART  
11**

**CRITERIA AND PROCEDURES FOR DETERMINING  
ELIGIBILITY FOR ACCESS TO OR CONTROL OVER  
SPECIAL NUCLEAR MATERIAL**

**STATEMENTS OF CONSIDERATION**

45 FR 76968  
Published 11/21/80  
Effective 2/4/81

**10 CFR Parts 11, 50, 70**

**Criteria and Procedures for  
Determining Eligibility for Access to or  
Control Over Special Nuclear Material**

**AGENCY:** U.S. Nuclear Regulatory  
Commission.

**ACTION:** Final rule.

**SUMMARY:** In March 1977, the Commission published for public comment proposed amendments to establish criteria and procedures for determining eligibility for access to or control over special nuclear material. As a result of public and staff comments, the record of an informal Hearing, and the recommendations of the Hearing Board, the scope of the proposed amendments has been narrowed to include only those fuel cycle facilities and transportation activities that use, process, or store formula quantities of special nuclear material. Light water reactors, non-power reactors, and facilities possessing only irradiated special nuclear material subject to the exemption of § 73.8(b) are not covered by these revised amendments. The Nuclear Regulatory Commission is now publishing these revised amendments in final form.

**EFFECTIVE DATE:** February 4, 1981.

**FOR FURTHER INFORMATION CONTACT:** Frank Gillespie or Jim Prell, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Phone: 301-443-5907.

**SUPPLEMENTARY INFORMATION:** Section 161i of the Atomic Energy Act of 1954, as amended, permits the Nuclear Regulatory Commission to prescribe regulations instituting a clearance program for those individuals who have access to or control over special nuclear material. Specifically, the section provides that the Commission may issue regulations . . . designating activities involving quantities of special nuclear material which in the opinion of the Commission are important to the common defense and security, that may be conducted only by persons whose character, associations and loyalty shall have been investigated under standards

and specifications established by the commission and as to whom the commission shall have determined that permitting each such person to conduct the activity will not be inimical to the common defense and security . . . ."

Pursuant to this statutory authority and after consideration of the results of public comments, the record developed in an informal hearing, and the recommendations of the hearing board, the Commission is issuing regulations which would require certain individuals involved in the operation of licensed fuel reprocessing plants, in the licensed use, processing, or storage of certain quantities of special nuclear materials, and in the transportation by the private sector of certain quantities of special nuclear material, to receive authorization from the Commission for access to or control over special nuclear material. Nuclear power reactors licensed pursuant to 10 CFR Part 50<sup>1</sup> are not covered by these amendments. They will be the subject of a separate rulemaking to include a notice and comment period. Additionally, non-power reactors and storage of fuel incident thereto, have been excluded from the requirements of these amendments pending completion of a separate ongoing review of total safeguards requirements adequacy at such facilities. When that assessment is complete, considerations of access authorization requirements will be included in the evaluation of overall safeguards upgrading which may be considered necessary for these facilities.

Finally, facilities possessing formula quantities of special nuclear material only in the form of irradiated special nuclear material subject to the exemption of § 73.8(b) are also excluded from these requirements as the Commission concludes that the risk of theft or diversion of such material is minimal. This is consistent with other safeguards requirements for irradiated special nuclear material.

These regulations utilize a personnel security program as a measure to protect against those employed in the affected nuclear activities who might conspire to steal or divert special nuclear material or conduct sabotage which would endanger the public by exposure to

radiation. Of course, a clearance program itself does not entirely solve the problem of the "insider," but, in the opinion of the commission, experience has shown that such programs do substantially reduce the risk. Moreover, the proposed program is one of several elements in the commission's overall safeguards program which together protect against threats, both internal and external.

Two levels of special nuclear material access authorization are established. The higher level, NRC-U, is based upon a full-field background investigation and will apply to (i) all individuals who require unescorted access to special nuclear material or within vital areas, (ii) those jobs in which an individual alone or in conspiracy with another individual who does not possess an NRC-U special nuclear material access authorization could act to steal or divert special nuclear material or to commit sabotage, and (iii) drivers of motor vehicles and pilots of aircraft transporting certain quantities of special nuclear material and those who escort road, rail, air or sea shipments of special nuclear material. The lower level, NRC-R, is based upon a National Agency Check and will apply to all individuals who require unescorted access to protected areas and who are not required to possess an NRC-U special nuclear material access authorization. An implementation schedule has been established to account for changed estimates of the time required to process access authorization applications (190 days for an NRC "U" and 130 days for an NRC "R") and for the initial flow of applications. Jobs at fixed sites requiring access authorization will be identified by licensee submittal of an amendment to the security plan. For jobs not requiring an amended security plan, affected individuals must have the required access authorization within 365 days of the effective date of the amendments. All others must have authorization 365 days after having the amended security plan approved designating those jobs which require access authorization. Excepted from the 365-day implementation in all cases are those who initially apply but have not received notification due to Commission processing time.

Both the National Agency Check and the full-field background investigation

<sup>1</sup>Except for the Fort St. Vrain facility.

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are conducted by the Office of Personnel Management. The National Agency check consists of a check of files of the FBI (fingerprint and central files), Office of Personnel Management (Security- Investigative index), and a check of military records and records of other government agencies, as appropriate. The full-field background investigation consists of interviews of references, conducted by investigative agents of the Office of Personnel Management, in addition to the records check. Sources of information developed in the course of the investigation are also interviewed. The full-field background investigation conducted by the Office of Personnel Management generally covers the 5-year period of the individual's adult life prior to the investigation.

Licensees and license applicants will be required to amend their security plans by identifying and describing jobs at their facilities which require authorization. Affected individuals will be required to obtain authorization according to the schedules set forth in the proposed rule. Individuals who are newly hired or who change jobs where the new job will require a material access authorization must obtain an authorization before beginning the job. Authorization will be renewed every 5 years.

The establishment of a material access authorization program in the licensed nuclear industry will affect individuals who are not employed by any licensee or contractor of the Commission as well as licensee employees. It is the Commission's intent to minimize both the impact on the rights of privacy and association of individuals affected, and the number of individuals affected, while providing an effective measure of protection against those who would seek employment with, or use their position in, the nuclear industry for purposes of theft or sabotage. In preparing these regulations, among the matters considered were the scope of investigations (e.g., whether a full-field background investigation should be required for all individuals), which job functions should require material access authorization (e.g., require authorization only for "key" positions or adopt a graded system with level of clearance determined by job), whether psychological assessment should be required, and the relation of the proposed program to current NRC and DOE personnel security programs.

The Commission also considered the question of whether new criteria should be developed against which a decision for authorization would be made. The present NRC security clearance criteria (10 CFR Part 10) were developed for

access to classified information and, as such, not all criteria may be equally significant for questions of access to special nuclear material, and some may not be perceived as relevant in specific cases. Also, there may be cases in which additional criteria, not now included in 10 CFR Part 10, would be more to the point. However, these criteria do correspond to the Federal Government's general approach to personnel security, and specifically, they are presently used for DOE access authorization programs. Furthermore, the criteria are in the nature of guidelines to be used in a decision process characterized by common sense judgments, rather than quantitative criteria. Moreover, the Commission is reluctant to devise a new set of criteria without evidence that such new criteria would significantly improve upon those which presently exist. The Commission notes, however, that the Department of Energy is currently reviewing the criteria applicable to access to Restricted Data and Material and the Commission will review its own criteria in 10 CFR Part 10 in light of any revision made by the Department of Energy in 10 CFR Part 710. Hence, in light of the above, the Commission is relying on the considerable expertise residing in the broad experience of the Federal Government in the area of personnel security programs by proposing the use of the criteria contained in 10 CFR Part 10 as guidelines in deciding questions of access to or control over special nuclear material.

Pursuant to the Atomic Energy Act of 1954, as amended, by the Energy Reorganization Act of 1974, and section 553 of title 5 of the United States Code, notice is hereby given that a new 10 CFR Chapter I, Part 11, and the following conforming amendments to 10 CFR Chapter I, Parts 50 and 70 are published as a document subject to codification.



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reasons exist for reactor operation. Finally, pursuant to 10 CFR 2.202(f), the Commission may, in appropriate circumstances, make the order immediately effective, which could result in immediate plant shutdown subject to a later hearing.

### IX. Funding

In view of the requirements in these rule changes regarding the actions to be taken in the event State and local government planning and preparedness are or become inadequate, a utility may have an incentive, based on its own self interest as well as its responsibility to provide power, to assist in providing manpower, items of equipment, or other resources that the State and local governments may need but are themselves unable to provide. The Commission believes that in view of the President's Statement of December 7, 1979, giving FEMA the lead role in offsite planning and preparedness, the question of whether the NRC should or could require a utility to contribute to the expenses incurred by State and local governments in upgrading and maintaining their emergency planning and preparedness (and if it is to be required, the mechanics for doing so) is beyond the scope of the present rule change. It should be noted, however, that any direct funding of State or local governments solely for emergency preparedness purposes by the Federal government would come through FEMA.

### X. Exercises

On an annual basis, all commercial nuclear power facilities will be required by NRC to exercise their plans; these exercises should involve exercising the appropriate local government plans in support of these facilities. The State may choose to limit its participation in exercises at facilities other than the facility (site) chosen for the annual exercise(s) of the State plan.

Each State and appropriate local government shall annually conduct an exercise jointly with a commercial nuclear power facility. However, States with more than one facility (site) shall schedule exercises such that each individual facility (site) is exercised in conjunction with the State and appropriate local government plans not less than once every 3 years for sites with the plume exposure pathway EPZ partially or wholly within the State, and not less than once every 5 years for sites with the ingestion exposure pathway EPZ partially or wholly within the State. The State shall choose, on a rotational basis, the site(s) at which the required annual exercise(s) is to be conducted; priority shall be given to new facilities

seeking an operating license from NRC that have not had an exercise involving the State plan at that facility site.

The Commission has determined under the criteria in 10 CFR Part 51 that an environmental impact statement for the amendments to 10 CFR Part 50 and Appendix E thereof is not required. This determination is based on "Environmental Assessment for Final Changes to 10 CFR Part 50 and Appendix E of 10 CFR Part 50, Emergency Planning Requirements for Nuclear Power Plants" (NUREG-0685, June 1980). Comments on the "Draft Negative Declaration; Finding of No Significant Impact" (45 FR 3913, January 21, 1980) were considered in the preparation of NUREG-0685.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that the following amendments to Title 10, Chapter I, Code of Federal Regulations, Parts 50 and 70, are published as a document subject to codification.

45 FR 62789

Published 9/22/80

Effective 10/22/80

### 10 CFR Part 50

#### Domestic Licensing of Production and Utilization Facilities; Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is amending the portion of one of its regulations that provides requirements for leak testing of containment building air locks in order to permit greater flexibility for such testing in the case of frequent use of the air locks.

**EFFECTIVE DATE:** October 22, 1980.

**FOR FURTHER INFORMATION CONTACT:** E. G. Arndt, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, DC 20555 (301-443-5997).

**SUPPLEMENTARY INFORMATION:** On January, 11, 1980, the Nuclear Regulatory Commission published in the *Federal Register* (45 FR 2330) a proposed amendment to its regulation 10 CFR Part 50, "Licensing of Production and Utilization Facilities" which would amend Appendix J, "Primary Reactor

Containment Leakage Testing for Water-Cooled Reactors," with regard to Type B testing requirements. Interested persons were invited to submit written comments by February 25, 1980. Three sets of comments were received. After consideration of the comments received and other factors involved, the Commission has adopted the amendment to Appendix J, 10 CFR Part 50, as published for public comment.

Copies of the comments, an abstract of comments containing staff responses, and the value/impact analysis supporting the rule, are available for public inspection at the Commission's Public Document Room at 1717 H Street, NW., Washington, DC. Single copies may be obtained on request from the Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: E. G. Arndt.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553, title 5 of the United States Code, the following amendment to 10 CFR Part 50 is published as a document subject to codification.

➤ 45 FR 71569

Published 10/29/80

Effective 10/29/80

### 10 CFR Part 50

#### Fire Protection Schedules for Operating Nuclear Power Plants

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is amending its regulations to temporarily suspend completion schedules for certain fire protection features in operating nuclear plants pending completion of its ongoing comprehensive fire protection rulemaking. This suspension is necessary because some NRC licensees are unable to meet fire protection implementation deadlines contained in licensed conditions. The Commission has found that fire protection measures already implemented give reasonable assurance of safety, and that no health and safety interest would be served by forcing certain licensees to shut down during the brief period between the license condition deadlines and the effectiveness of the final fire protection rule.

**EFFECTIVE DATE:** October 29, 1980.

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**FOR FURTHER INFORMATION CONTACT:** William Shields, Office of Executive Legal Director, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, phone 301-492-8696.

**SUPPLEMENTARY INFORMATION:** On May 29, 1980, the Commission published in the *Federal Register* (45 FR 36082) a Notice of Proposed Rulemaking entitled "Fire Protection Program for Nuclear Plants Operating Prior to January 1, 1979." The proposed rule provided that all fire protection modifications except alternate or dedicated shutdown capability would be required to be implemented by November 1, 1980, unless the Commission approve an extension for good cause. This deadline was also stated in the Commission's May 27, 1980 Memorandum and Order on the Union of Concerned Scientists' Petition for Emergency and Remedial Action. 11 NRC 707, 719.

Many of the commenters on the proposed rule contended that the November 1 deadline was unachievable. Moreover, much more time than was

earlier anticipated has been required to prepare a final rule on fire protection. Although the final rule is near completion, and will incorporate an implementation schedule different from that in the proposed rule, it has not yet been published and in any event would not be effective until 90 days after publication.

Certain NRC licensees, however, are at present operating under license conditions or technical specifications thereto which include the November 1 deadline or other dates which will precede the effective date of the final rule. To the extent that these licensees have been unable to complete all of the fire protection measures to which these deadlines apply, continued operation would violate the license conditions. The violation would extend only until the final rule becomes effective, since the implementation schedule contained in the final rule will supersede inconsistent license conditions.

The Commission has determined, based upon a review of the entire record in this rulemaking, that relief from these license conditions is appropriate pending promulgation of the final rule on fire protection applicable to all NRC licensees. Extensive fire protection measures have already been implemented at all operating plants. The implementation schedule of the final rule will be uniform and comprehensive, and will apply to all operating plants including those with different schedules contained in license conditions. No public health and safety interest would be served by forcing only those licensees unable to meet deadlines preceding the effectiveness of the final

rule to shut down for the brief interim. To the contrary, the fire protection measures already implemented give reasonable assurance that all operating nuclear plants may continue to operate safely even though the final rule will require additional fire protection measures at many plants.

The Administrative Procedure Act provides that a rule may be effective upon publication when that rule "grants or recognizes an exception or relieves a restriction." 5 U.S.C. 553(d)(1). This rule relieves certain NRC licensees from license conditions or technical specifications thereto in regard to fire protection implementation deadlines, and will therefore be effective upon the date of publication in the *Federal Register*. Furthermore, as noted above, the proposed rule stated that extensions from the November 1, deadline would be considered for good cause. Extensive public comment was received to the effect that the deadline was unrealistic and should be revised. Under these circumstances the Commission believes that there is good cause for an extension of the license condition schedules pending effectiveness of the final rule on fire protection.

The rule provides that all compliance dates contained in license conditions or technical specifications for required fire protection measures are suspended pending further action by the Commission. As is clear from the above discussion, that further action will be promulgation of the final rule on fire protection. The Commission intends that licensees affected by this rule should use best efforts to complete all required measures as soon as possible despite the suspension of the deadlines for this brief period.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that the following amendment to Title 10, Chapter I, Code of Federal Regulations, Part 50, is published as a document subject to codification.

➤ 45 FR 76602  
Published 11/19/80  
Effective 2/19/81

### 10 CFR Part 50

#### Fire Protection Program for Operating Nuclear Power Plants

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is amending its regulations to require certain provisions for fire protection in operating nuclear power plants. This action is being taken to upgrade fire protection at nuclear power plants licensed to operate prior to January 1, 1979, by requiring resolution of certain contested generic issues in fire protection safety evaluation reports.

**EFFECTIVE DATE:** February 19, 1981.

**Note.**—The Nuclear Regulatory Commission has submitted this rule to the Comptroller General for review as may be appropriate under the Federal Reports Act, as amended (44 U.S.C. 3512). The date on which the reporting requirement of this rule becomes effective, unless advised to the contrary, reflects inclusion of the 45-day period that statute allows for such review (44 U.S.C. 3512(c)(2)).

**FOR FURTHER INFORMATION CONTACT:** David P. Notley, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, phone 301-443-5921 or Robert L. Ferguson, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, phone 301-492-7096.

**SUPPLEMENTARY INFORMATION:** On May 29, 1980, the Nuclear Regulatory Commission published in the *Federal Register* (45 FR 36082) a notice of proposed rulemaking inviting written suggestions or comments on the proposed rule by June 30, 1980. The notice concerned proposed amendments to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," which would require certain minimum provisions for fire protection in nuclear power plants operating prior to January 1, 1979. Fifty-one comment letters were received regarding the proposed amendments. A number of comments pertained to specific requirements in the proposed Appendix R, and these will be dealt with below. However, there were three substantive contentions which were raised by many of the commenters. These three comments are summarized as follows:

1. Most commenters stated that the 30 day comment period was too short to permit adequate detailed response and

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that the comment period should have been extended.

The Commission does not agree. The NRC has been developing fire protection requirements since 1975. The NRC published comprehensive fire protection guidelines, Branch Technical Position BTP APCSB 9.5-1, and its Appendix A in 1976. Licensees have compared their fire protection programs against these guidelines and have discussed their deviations from these guidelines with the NRC staff for the past four years during the NRC's fire protection reviews of operating reactors. A Safety Evaluation Report and, in most cases, supplements to the Safety Evaluation Report, have been issued for each operating reactor. These reports describe fire protection alternatives that have been proposed by the licensee and found acceptable by the staff as well as unresolved fire protection issues remaining between the staff and the licensee. Proposed Appendix R provided the Commission's requirements for resolving those issues. Thus, it concerns only a limited number of issues derived from the use of the earlier guides. The Commission believes that a 30-day comment period was adequate under these circumstances.

2. Many licensees questioned the need for backfitting all the requirements of Appendix R. They commented that they had previously complied with staff fire protection recommendations in "good faith" and have committed to or completed certain modifications. They contend that the staff has properly determined that these modifications provide at least the level of fire protection described by the guidance contained in Appendix A to Branch Technical Position BTP APCSB 9.5-1. They also contend that these modifications provide a level of protection at least equivalent to that contained in the proposed rule. They express the concern that the proposed rule was written in such specific language that fire protection issues that were thought closed would be reopened and new, but not necessarily better, modifications would be required. These modifications could be accomplished only by the expenditure of considerable engineering, design, and construction effort and at great undue expense. The commenters request that the requirements in the proposed rule be rewritten to specify only the general requirements of what needs to be accomplished.

These comments raise three related issues. The first relates to the need for specific requirements. The general requirements relating to fire protection

are already set forth in General Design Criterion 3 of Appendix A to 10 CFR Part 50 and in the NRC guidance documents. These general provisions gave rise to a number of disputes over whether specific methods adequately accomplished the intended goal. The proposed rule is intended to provide sufficient specific guidance to ensure satisfactory resolution of these issues. Thus, reverting to generalized guidance would not accomplish the intended purpose of the proposed rule.

The second issue involved some instances in which the specific wording used resulted in unnecessary and unintended restrictions. For example, the proposed rule called for a "fresh water" supply. For firefighting purposes, brackish water is satisfactory and a "fresh" water supply is unnecessary. Similarly, the proposed rule called for an "underground" yard fire main loop. Often portions of a fire main loop run above ground in and as they enter structures. The Commission had not intended to prohibit running portions of a fire main loop above ground. Other similar changes are discussed in Section III, "Specific Requirements," of this preamble.

The third issue relates to imposition of requirements on plants with presently installed or with existing commitments to install fire protection features previously determined by the staff to satisfy the guidance of Appendix A to BTP APCSB 9.5-1. The Commission generally agrees that, except for three sections that will be back fitted, Appendix R should not be retroactively applied to features that have been previously approved by the NRC staff as satisfying the provisions of Appendix A to BTP APCSB 9.5-1.

The NRC staff had intended, in its original proposal for Appendix R, that the requirements be applicable only for the resolution of unresolved disputed fire protection features. Thus, the staff had not intended the provisions of Appendix R to require modification of previously approved features. This was not clearly described in the proposed rule as published for comment. In fact, the Supplementary Information published with the proposed rule explicitly indicated that "[a]ll licensees will be expected to meet the requirements of this rule, in its effective form, including whatever changes result from public comments."

In determining whether the specific requirements of Appendix R should be imposed on licensees with presently installed or existing commitments to install fire protection features previously determined to satisfy Appendix A to Branch Technical Position BTP APCSB

9.5-1, it is important to recognize that Appendix R addresses only a portion of the specific items contained in the more comprehensive document, Branch Technical Position BTP APCSB 9.5-1 and its Appendix A. Appendix A to BTP APCSB 9.5-1 has been the basic fire protection guidance used by the staff in their fire protection reviews conducted for all operating plants during the past several years. For many plants, licensees proposed systems and features that satisfactorily achieved the fire protection criteria set forth in Appendix A to BTP APCSB 9.5-1 and began to promptly implement such features and systems.

Satisfactory features and systems are already in place and in operation in many plants. There is a reasonable degree of uniformity among most of these approved features for all facilities since they were reviewed against the same criteria of Appendix A to BTP APCSB 9.5-1. In general, the features previously approved by the NRC staff in its reviews of fire protection using the criteria of Appendix A to BTP APCSB 9.5-1 provide an equivalent level of fire protection safety to that provided under the specific provisions of Appendix R. Thus, the further benefit that might be provided by requiring that previously approved features be modified to conform to the specific language set forth in Appendix R is outweighed by the overall benefit of the early implementation of such previously approved features, which in many cases are currently being installed.

Nevertheless, as a result of its continuing review of fire protection matters, the NRC staff has indicated to the Commission that there are requirements in three sections in which the protection afforded by Appendix R over and above that previously accepted, may be desirable. The Commission has decided that these requirements should be retroactively applied to all facilities. This decision is not meant to reflect adversely on previous licensee or staff evaluations; rather its purpose is to take fully into account the increased knowledge and experience developed on fire protection matters over the last several years.

The first of these sections is related to fire protection features for ensuring that systems and associated circuits used to achieve and maintain safe shutdown are free from fire damage. Appendix A to BTP APCSB 9.51 permits a combination of fire-retardant coatings and fire detection and suppression systems without specifying a physical separation distance to protection redundant systems (Appendix A, D.1(2)), and such



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arrangements were accepted in some early fire protection reviews. As a result of some separate effects tests, the staff changed its position on this configuration, and subsequent plans have been required to provide additional protection in the form of fire barriers or substantial physical separation for safe shutdown systems. No credit for such coatings as fire barriers is allowed by Section III.G of Appendix R. Appendix A to Branch Technical Position BTP APCSB 9.5.1 and the proposed Appendix R recognized that there were plant-unique configurations that required fire protection features that are not identical to those listed in Section III.G of Appendix R. For these cases, fire protection features were developed by the licensee and described in a fire hazards analysis. Some of these arrangements were accepted by the staff as providing equivalent protection to the requirements of Section III.G to Appendix R.

Requirements that account for all of the parameters that are important to fire protection and consistent with safety requirements for all plant-unique configurations have not been developed. In light of the experience gained in fire protection evaluations over the past four years, the Commission believes that the licensees should reexamine those previously approved configurations of fire protection that do not meet the requirements as specified in Section III.G to Appendix R. Based on this reexamination the licensee must either meet the requirements of Section III.G of Appendix R or apply for an exemption that justifies alternatives by a fire hazard analysis. However, based on present information, the Commission does not expect to be able to approve exemptions for fire-retardant coatings used as fire barriers.

The second relates to emergency lighting. Section III.J of Appendix R calls for 8-hour emergency lighting, whereas in some cases less than 8-hour emergency lighting has been accepted as satisfying Appendix A to BTP APCSB 9.5-1. While an adequate level of safety may be provided by less than an 8-hour supply, an 8-hour system would provide added protection and would generally involve only a small cost. The Commission therefore believes that licensees should upgrade the previously approved facilities to satisfy the 8-hour lighting requirement of Appendix R.

The third relates to protection against fires in noninerted containments involving reactor coolant pump lubrication oil (Section III.O of Appendix R). The proposed rule

permitted either an oil collection system or a fire suppression system. The staff has also accepted an automatic fire suppression system as an acceptable method of fire protection for this application. The Commission has concluded that fire suppression systems do not give adequate protection for fires that may be induced by seismic events. The Commission therefore believes that previously approved suppression systems should be replaced with oil collection systems that can withstand seismic events.

The technical basis on which these three sections are based are further discussed in Section III. "Specific Requirements," of this preamble.

3. Most commenters stated that the implementation schedule contained in the proposed rule is impossible to meet for any of the operating plants. The commenters further stated that if the implementation schedule in the effective rule is the same as that in the proposed rule, the Commission must be prepared to either shutdown each operating nuclear power plant, or process exemption requests.

The commenters then concluded that the implementation schedule should be rewritten to allow an adequate time period for compliance. The proposed rule stated that "all fire protection and modifications identified by the staff as necessary to satisfy Criterion 3 of Appendix A to this part, whether contained in Appendix R to this part or in other staff fire protection guidance (except for alternate or dedicated shutdown capability) shall be completed by November 1, 1980 unless, for good cause shown, the Commission approves an extension," (proposed paragraph 50.48 1.(c)). The Commission went on to state its intention in the Statement of Consideration to the rule that "... no plant would be allowed to continue to operate after November 1, 1980, or beyond an extended date approved by the Commission, unless all modifications (except for alternate or dedicated shutdown capability) have been implemented."

The Commission has reconsidered the implementation schedule and has determined that it should be modified for the following reasons:

- After reviewing the comments and the information developed as a result of completion of fire reviews over the past 6 months, the staff has informed the Commission that the date of November 1, 1980, is not possible because the effective date of the rule will be after that date.

- The staff has informed the Commission that it would expect virtually all licensees to request

exemptions if the new implementation dates do not provide an appropriate period of time for complying with the requirements of Appendix R. The time and manpower resources needed by the licensees to prepare such requests and by the staff to formulate recommendations on these requests is not warranted from the standpoint of timely fire protection improvement.

- The revised implementation schedule provides a careful balance of these considerations, calling for the remaining fire protection modifications to be implemented and installed on a phased schedule that is as prompt as can be reasonably achieved.

The revised schedules distinguish between requirements imposed for the first time on the licensee by Appendix R and those requirements already imposed in license conditions or Technical Specifications issued prior to the effective date of the rule. For requirements imposed by Appendix R, including the items "backfit" to all plants, the schedule provides a reasonable time after publication of the rule for completion of required modifications. For requirements already imposed by license conditions providing for implementation after November 1, 1980, the Commission has reviewed these schedules and has found that in some instances the allotted time for completion of the required modifications may be excessive. Thus, for fire protection features other than those covered by Appendix R, although the Commission has extended the compliance dates beyond the November 1, 1980, date in the proposed rule, the Commission has added a requirement that limits the compliance schedule in existing licenses if such schedules extend beyond what we now believe should have been a reasonable schedule initially. Relief from such limitation may be granted by the Director of Nuclear Reactor Regulation upon a showing that there is good cause for extending such date and that public health and safety is not adversely affected by such extension.

It should also be noted that for licensees whose license conditions imposed a schedule with a compliance date of November 1, 1980, or other date prior to the effective date of § 50.48, the Commission has suspended such compliance dates by promulgating on October 29, 1980, a temporary rule § 50.48 (45 FR 71569), which will be superseded by this rule.

To better understand the nature of the public comments received and the staff's resolution of these comments, the following section will consider each section of Appendix R to this part. In



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Section III, we provide a summary of the Technical Basis for each requirement, followed by a summary of the public comments and a statement of the staff's disposition of those comments.

### *Section I. Introduction and Scope*

This section has been revised as a result of comments to include a discussion of the importance of safe shutdown capability and the distinction between requirements for "safety-related" equipment and equipment needed for "safe shutdown."

### *Section II. General Requirements*

This section has been substantially rewritten as a result of comments to provide a concise summary of general requirements. The specific requirements were consolidated with the appropriate parts of Section III, "Specific Requirements," except that the credit given for 50-foot separation has been dropped.

### *Section III. Specific Requirements*

The requirements in this rule are based upon principles long accepted within that portion of American industry that has been classified by their insurance carriers as "Improved Risk" or "Highly Protected Risk". In each of these cases, the Commission has decided that the overall interest of public safety is best served by establishing some conservative level of fire protection and ensuring that level of compliance exists at all plants. The following is a list of the specific technical bases and resolution of public comments for each of the specific requirements in Appendix R.

**A. Water Supplies for Fire Suppression Systems Technical Basis.** One of the basic fire protection requirements for a modern industrial site in the United States is a separate water distribution system for fire protection with dual water supplies. Duplicate water supplies are required to ensure uninterrupted fire suppression capability allowing for single failures and periodic maintenance and repair of vital portions of the systems. Duplicate water supplies may consist of separate suction for fire pumps from a large body of water such as lake, river, or pond or from two water storage tanks.

For nuclear power plants, the distribution system is required to consist of a loop around the plant with suitable valves for isolating portions of the system for maintenance or repair without interrupting the water supply to the various fire suppression systems in the plant. Thus, with dual supplies and a loop concept, an adequate water supply can be ensured to each manual or

automatic water suppression system throughout the plant.

An ensured minimum volume of water is set aside and dedicated for fire protection uses to be available at all times regardless of other simultaneous water uses in the plant. This water volume is dedicated for fire service by means of separate storage tanks or separate pump suction from a large body of water. When common tankage is employed for fire service needs and other water services, the fire pump suction must be at the bottom of the tank and other water supply suction must be located at a higher level to ensure that the minimum dedicated water volume is set aside for fire protection needs. Administrative controls by themselves, such as locked valves to ensure adequate water supply for fire fighting needs, are deemed unacceptable at nuclear power plants.

### *Comment Resolution*

Many commenters stated that we were being too restrictive by stipulating an underground yard fire main loop and fresh water supplies. Our intent was only that a yard fire main loop be furnished. We have deleted the specification for an underground loop since special conditions may dictate that part of the loop be above ground or inside safety-related buildings. Such arrangements are acceptable.

With regard to the specification for a fresh water supply, the staff was attempting to avoid potential plant problems that are not associated with fire protection. From a fire protection standpoint, salt or brackish water is acceptable for fire suppression provided the fire protection system is designed and maintained for salt or brackish water. The requirement for fresh water supplies is therefore dropped. Other operational problems unrelated to fire protection that may result from the use of salt or brackish water for fire suppression activities are outside the scope of this regulation.

Several commenters took issue with the requirement for two separate redundant suction, stating that some plants use a single large intake structure on a lake or a river for all water requirements. The requirement for separate intake structures was not intended and the rule has been clarified.

Several comments called for deleting the requirements for dedicated tanks or use of vertical standpipe for other water services when storage tanks are used for combined service-water/fire-water uses, on the basis that this is overly restrictive and other ways are available to ensure a dedicated supply such as weirs, suction location, etc. Two separate but

related issues are involved here. The first is the requirement for dedicated water storage tanks for fire fighting purposes. The suggestion that the requirement for dedicated tanks be deleted was rejected for the reasons stated in the preceding Technical Basis.

The other point deals with ensuring minimum water storage capacity for fire suppression activities when storage tanks are used for combined service-water/fire-water uses. The term "vertical standpipe for other water service" simply means that the suction for other water uses in common storage tanks will be located sufficiently high to ensure the minimum water volume needs for fire suppression activities. If the commenters were assuming that "vertical standpipe" referred only to pipes inside the tank, this is not the case. In fact a standpipe exterior to the storage tank is more desirable since any leakage would be immediately evident. On an internal standpipe a leak in the pipe could actually allow depletion of the water otherwise to be reserved for fire uses. The rule has been clarified to allow physical alternatives for water supply dedication but to preclude exclusive use of administrative controls for this purpose.

Some commenters objected to the requirement that other water systems used as a backup water supply for fire protection should be permanently connected to the fire main system and suggested that it would be sufficient to provide a water supply capable of being connected to the fire main system within ten minutes of the loss of normal water supply or pumps. The rule does not address backup water supplies. The requirement means that, if another water system is used as one of the redundant water supplies, it must satisfy all of the requirements of the fire protection water supplies. Additional backup supplies need not meet these requirements.

One commenter asked why only a two-hour water supply is required when the Browns Ferry Fire lasted well over two hours. All of the investigations of the Browns Ferry Fire clearly show that if water had been used immediately, the fire would have been extinguished much earlier. Indeed once the manual fire fighting activities were started with the use of only one fire hose stream, the fire was extinguished within one-half hour. The staff would find unacceptable any condition in which a postulated fire that could threaten safe shutdown capability could not be controlled and extinguished within two hours with any combination of manual and automatic fire suppression activities. Therefore, a two-

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hour water supply is considered adequate. It should also be noted that this minimum dedicated water volume is based on maximum flow rates. Since most fires are controlled and extinguished with much smaller flow rates, this requirement realistically represents a dedicated water volume far in excess of two hours.

### B. Sectional Isolation Valves.

**C. Hydrant Isolation Valves**  
*Technical Basis.* These two requirements are similar and can be treated together. Proper valving is required to isolate portions of the water distribution system for maintenance or repair without interrupting the water supply to manual or automatic fire suppression systems inside the plant. Valves are similarly required to permit isolation of outside yard hydrants from the water distribution system for maintenance or repair without interrupting water supply to fire suppression systems inside the plant. Visually indicating valves such as post indicator valves are preferred so that the position of the valve can be readily determined. However, key-operated valves (commonly known as curb valves) are acceptable for these purposes where plant-specific conditions warrant their use.

**B. Section Control Valves—Comment Resolution.** Many commenters stated that the requirement for "approved visually indicating" sectional control valves was overly restrictive, unnecessary, and not specific with respect to who should give the approval. The Commission has accepted this suggestion; the rule now requires that sectional control valves shall be provided to isolate portions of the fire main for maintenance or repair without shutting off the entire system. Post indicator or key-operated valves are mentioned as two examples of acceptable valves.

**C. Hydrant Block Valves—Comment Resolution.** A number of commenters made suggestions for rewording this section. This section has been clarified to state the requirement for capability to isolate hydrants from the fire main without disrupting the water supply to automatic or manual fire suppression systems in any area containing or presenting a fire hazard to safety-related or safe shutdown equipment.

One commenter suggested that this requirement be dropped in its entirety since it "is a new requirement which has not been subjected to the peer review process." This suggestion was rejected on the basis that Appendix A to BTP APCSB 9.5-1 contains the following sentence: "The lateral to each hydrant from the yard main should be controlled

by a visually indicating or key-operated (curb) valve," and there was an opportunity to comment on this document.

**D. Manual Fire Suppression Technical Basis.** Considerable reliance is placed on automatic fire suppression systems throughout a nuclear power plant. However, manual fire fighting activities often can control and extinguish slowly developing fires before an automatic fire suppression system is actuated. In addition, fires that are controlled or extinguished by automatic systems require a certain amount of manual response. Also, some areas of the plant do not warrant the installation of automatic fire suppression systems. Manual response is the only fire suppression available for these areas; thus, it is important that manual fire fighting capability be present in all areas of the plant, and that standpipe and hose stations be located throughout the plant. The standpipe and hose stations are to be located so that at least one effective hose stream can be brought to bear at any location in the plant containing or presenting a hazard to structures, systems, or components important to safety. They are to be supplied from the fire water supply system except for those inside containment, which may be connected to other reliable water supplies if a separate penetration into containment cannot be made for fire water service needs.

### Comment Resolution

Several commenters suggested adding a sentence reading "Standpipe and hose stations are not required if sufficient justification can be provided that adequate fire protection features have been provided to account for a given fire area." This suggestion was rejected. The staff has taken the position that the minimum requirements are that at least one effective hose stream that will be able to reach any location that contains or could present an exposure fire hazard to the safety-related equipment. The Commission concluded that no analyses can identify hazards so carefully that this minimum requirement can be further reduced.

**E. Hydrostatic Hose Test Technical Basis.** Fire hoses should be hydrostatically tested periodically to ensure that they will not rupture during use. The requirement for a minimum test pressure of 300 psi comes from NFPA No. 196 (National Fire Protection Association Standard No. 196—Standard for Fire Hose), a nationally recognized consensus standard. This standard contains other guidance for the

use and care of fire hose that most industries find useful.

### Comment Resolution

Many commenters pointed out the erroneous usage of the term "service pressure" rather than "operating pressure" in this requirement. The intended meaning for this requirement is that all hoses would be tested at a pressure greater than the maximum pressure found in the fire protection water distribution systems. The correct terminology is "operating pressure." The rule has been so changed. In addition, the staff added a specific minimum test pressure requirement of 300 psi to meet the NFPA standard.

One commenter also pointed out that hoses should be inspected for mildew, rot, cuts, or other damage. Although this is a valid comment, it is not an unresolved issue with any licensee so it need not be covered by this rule. In addition, such inspections are already being performed in accordance with the plant's Technical Specifications.

**F. Automatic Fire Detection Technical Basis.** The requirement that automatic fire detection systems be installed in all areas that contain safe shutdown or safety-related systems or components follows generally accepted fire protection practice. Installation of such fire detection capability is independent of any requirements for automatic or manual fire suppression capability in an area. The purpose of these detection systems is to give early warning of fire conditions in an area so that the fire brigade can initiate prompt actions to minimize fire damage within the plant.

### Comment Resolution

Many commenters suggested that the words "automatic fire detection capability" be substituted for "automatic fire detection systems" on the basis that, as worded, the requirements are too limiting. They stated that an automatic sprinkler system with appropriate alarm check valves and central alarm features provides acceptable detection/alarming capability. Several commenters claimed that a separate detection system is not needed in areas covered by sprinkler systems equipped with fusible link sprinkler heads. A fusible link has a time delay before it actuates. However, more importantly, a smoldering localized fire that could do damage may not generate enough heat to melt the fusible link. While we do not disagree that the alarm from an automatic fire suppression system serves as notification that a fire exists, we concluded that the minimum requirement for a separate fire detection

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system in all such areas should be retained. The fire hazards analysis may call for a separate suppression system, but this would be in addition to the fire detection system.

**G. Protection of Safe Shutdown Capability Technical Basis.** The objective for the protection of safe shutdown capability is to ensure that at least one means of achieving and maintaining safe shutdown conditions will remain available during and after any postulated fire in the plant. Because it is not possible to predict the specific conditions under which fires may occur and propagate, the design basis protective features are specified rather than the design basis fire. Three different means for protecting the safe shutdown capability outside of containment are acceptable. The first means is separation of redundant safe shutdown trains and associated circuits by means of 3-hour fire rated barriers. The second means is a combination of separation of redundant safe shutdown trains and associated circuits by a 1-hour fire rated barrier and automatic fire suppression and detection capability for both redundant trains. The third means, which may be used only when redundant trains and associated circuits are separated by 20 feet or more of clear space, requires automatic fire suppression and detection systems in the area. An alternative or dedicated safe shutdown capability independent of the fire area is required if fire protection for safe shutdown capability cannot be provided as outlined above. For cables and equipment needed for safe shutdown located inside of noninerted containments, a lesser degree of fire protection is permitted because transient exposure fires are less likely inside containment during plant operation. Section III.M, "Fire Barriers," discusses the technical basis for the 3-hour barrier, and Section III.L, "Alternative and Dedicated Shutdown Capability," discusses the technical basis for safe shutdown capability.

### *Comment Resolution*

Many commenters suggested that the first paragraph be changed slightly and the rest of this section deleted. The basis for their contention is that the rule should state simply the requirement to protect cables or equipment of systems necessary for safe shutdown of the plant and leave specific implementation details in some other type of document.

We have modified this section by removing the listing of considerations, deleting Table I, and revising the wording to provide clarification.

### *H. Fire Brigade.*

**I. Fire Brigade Training Technical Basis.** Most modern industrial plants with replacement cost values approaching those of a modern nuclear powered electric generating station have a full-time fully equipped fire department, including motorized fire apparatus. Because of the reduced severity of fire hazards in a nuclear generating station as compared to a manufacturing plant, the Commission believes that it is not necessary to mandate a fully staffed fire department. However, manual fire response capability is required at a nuclear plant and a properly equipped and fully trained fire brigade will satisfy this need. The Commission has determined that a brigade of five persons constitutes the minimum size sufficient to perform the actions that may be required by the brigade during the fire and to provide some margin for unanticipated events.<sup>1</sup> Similarly, the training requirements listed are considered the minimum needed to ensure that the fire brigade will be able to function effectively during a fire emergency.

The proposed rule required emergency breathing apparatus without specifying the number of such pieces of apparatus. The rule has been modified to specify the personnel for whom such apparatus is to be provided and to specify reserve air requirements.

**H. Fire Brigade—Comment Resolution.** Many commenters suggested changing this requirement to a simple statement that a trained and equipped, nominal size, site fire brigade of five persons be provided on each shift unless a lesser number is justified. This recommended change was rejected by the Commission for the reasons stated in the Technical Basis.

Some commenters objected to the exclusion of the shift supervisor from the fire brigade. The commenters felt that the shift supervisor should go to the fire and provide the benefit of his expertise and authority. The rule would not prevent this. However, the shift supervisor may have to go elsewhere during the course of a fire that adversely affects plant operation. The fire brigade leader must stay with the fire brigade and be assigned no other responsibilities during a fire emergency, therefore, the shift supervisor must be excluded from membership on the fire brigade.

**I. Fire Brigade Training—Comment Resolution.** Many commenters have

<sup>1</sup> This is discussed at length in the NRC staff's "Evaluation of Minimum Fire Brigade Shift Size", dated June 8, 1979; copies are available from David P. Notley, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

stated that NRC used unnecessary detail in spelling out specific requirements for classroom instruction, fire fighting practice, and fire drills. Some commenters felt that these requirements were more detailed than anything the Commission has published with regard to operator training. The Commission here points out that most of the investigations of the TMI accident identified inadequately trained operators as an important factor and that work is now being done in this area. The fact is not that the training requirements spelled out here for the fire brigade members are excessive when compared to training requirements for reactor operators, but that fire brigade training is further along in development, and training parameters that are essential to a comprehensive program have been identified.

**J. Emergency Lighting Technical Basis.** Emergency lighting is required in all nuclear power plants. Battery-powered lights with capacities of 1 1/2 to 2 hours is usually sufficient for emergency egress. However, the postfire emergency lighting requirements in a nuclear power plant are of a different kind. The need is for lighting that aids the access to equipment and components that must be manually operated by plant personnel to effect safe plant shutdown during plant emergencies. Because such activities may extend over a considerable period of time both during and after the fire, it is prudent to provide 8-hour battery emergency lighting capability to allow sufficient time for normal lighting to be restored with a margin for unanticipated events.

### *Comment Resolution*

Many commenters stated that the requirement for emergency lighting is overly restrictive in three specifics: first, that emergency lighting is unnecessary in many of the designated areas; second, that the requirement for sealed beam or fluorescent units is overly restrictive; third, that the requirement for individual 8-hour battery power supply is excessive. Three commenters recommended a 2-hour battery power supply; five commenters recommended a plant-specific power supply; and one commenter recommended that there be no permanent installation.

These suggestions have been accepted in part. Lighting units with 8-hour battery supplies are to be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto. The reasoning behind the requirement for an 8-hour battery power supply is that there can be a great deal of other activity during a



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fire emergency and operators involved in safe plant shutdown should not also have to be concerned with lighting in the area. The small cost differential between 2-hour supply and the substantial additional protection afforded by the 8-hour supply does not warrant reducing this requirement. The Commission has decided to require an 8-hour battery power supply in all areas needed for operation of safe shutdown equipment and in access and egress routes.

**K. Administrative Controls Technical Basis.** The fire protection program uses administrative controls for fire prevention and prefire planning. The items listed in this section are generally accepted within the fire protection community as minimum requirements for an effective administration of the fire protection program. Controls are placed on the storage and use of combustible materials to reduce the fire loading in safety-related areas and on ignition sources to avoid careless operations. Procedures are used to control actions to be taken by individuals who discover a fire and by the fire brigade for the development of preplanned fire fighting strategies and actual fire fighting techniques.

### *Comment Resolution*

Many commenters stated that this requirement was much too detailed for a regulation. Some stated that the requirements should apply only to those areas having safe shutdown equipment. Other commenters stated that a simple statement that administrative procedures should be established to control the various fire hazards throughout the plant was sufficient, and that the details could be spelled out in a regulatory guide or some other similar document.

Minor changes have been made in the wording of this requirement for clarification.

### *L. Alternative and Dedicated Shutdown Capability.*

**Technical Basis.** In some locations (such as the cable spreading room) within operating nuclear power plants, it is not always possible or practicable to protect redundant safe shutdown systems against adverse effects of fire or fire suppression activities only through the use of fire protection features because the redundant safe shutdown systems in a given fire area are too close to each other. Alternative shutdown capability has usually been required to be independent of the control room, cable spreading room, switchgear rooms and cable riser areas because redundant systems in these areas are not adequately separated. When plant

modifications to provide alternative shutdown systems are extensive, a dedicated system that is essentially a minimum capability safe shutdown train and is independent of those already existing may be provided. This minimum capability is required to maintain the process variables within those values predicted for a loss of offsite power. The case of loss of offsite power is assumed because fires in certain circumstances (e.g., electrical distribution system) could cause or be related to such a loss. Fire damage to cold shutdown capability is limited to damage that can be repaired within 72 hours to provide a margin in achieving cold shutdown conditions. Consideration is given to associated circuits because most plants were not designed with this concept in mind. Should either the alternative or dedicated capability be required to function because of a fire, it must not be disabled by fire damage to associated circuits. Also, this capability does not have to meet the single failure criterion because it is only one of several levels of defense. Seismic Category I criteria is not imposed because fires that would require the installation of alternative or dedicated shutdown capability are not seismically induced.

### *Comment Resolution*

Many of the commenters stated that this requirement exceeded the scope of Appendix R by defining alternative shutdown requirements. They stated that the time requirements are excessive and should be dropped. They also contend that this regulation does not take into account the many plant reviews being conducted under the Systematic Evaluation Program (SEP).

It is generally understood that cold shutdown is the ultimate safe shutdown condition and that, for each fire area, different means may be used and may be necessary to achieve cold shutdown. Because a fire in certain areas at some plants would have the capability of disabling systems required to achieve both hot and cold shutdown, it is necessary to specify the minimum capability and time requirement for each condition necessary to achieve safe shutdown. We agree that evaluations being made under the Systematic Evaluation Program (SEP) may also call for alternative or dedicated shutdown capability for reasons other than fire protection. For example, seismic, flooding, or emergency core cooling requirements resulting from the SEP may require additional modifications. Each licensee should be aware of the status of the SEP so that the requirements resulting from SEP can be effectively integrated with those relating to fire

protection to the extent possible. However, the Commission has decided that the modifications required to complete the fire protection program should not be deferred until the SEP review is completed.

### *M. Fire Barriers.*

**Technical Basis.** The best fire protection for redundant trains of safe shutdown systems is separation by unpierced fire barriers—walls and ceiling-floor assemblies. Because these barriers are passive fire protection features, they are inherently reliable provided they are properly installed and maintained. Fire barriers have been used successfully for many years to subdivide large potential fire losses into smaller, more acceptable risks. Even fire barriers with openings have successfully interrupted the progress of many fires provided the openings were properly protected by fire doors or other acceptable means.

Fire barriers are "rated" for fire resistance by being exposed to a "standard test fire". This standard test fire is defined by the American Society for Testing and Materials in ASTM E-119, "Standard for Fire Resistance of Building Materials." Fire barriers are commonly rated as having a fire resistance of from 1 to 8 hours. Most "Improved Risk" or "Highly Protected Risk" (as classified by insurance carriers) industrial properties in the United States require fire barriers to have a resistance rating of 2 to 4 hours.

While a nuclear power plant has a low fire load, the potential consequences of fire are serious. Therefore, the Commission has selected 3 hours has been as an acceptable minimum fire resistance rating for fire barriers separating redundant trains for safe shutdown systems. This will give ample time for automatic and manual fire suppression activities to control any potential fire and for safe shutdown activities to properly control the reactor. Many operating plants, or plants that are already built but that are not yet operating, have both trains of safe shutdown equipment located in close proximity and a single fire could damage or destroy the functional capability of both redundant trains. If specific plant conditions preclude the installation of a 3-hour fire barrier to separate the redundant trains, a 1-hour fire barrier and automatic fire suppression system for each redundant train will be considered the equivalent of 3-hour barrier.

If the 1-hour fire barrier and automatic fire suppression for each redundant train cannot be provided because of plant-specific conditions, alternative or dedicated shutdowns capability will be



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required to ensure safe shutdown capability. The use of a 1-hour barrier in conjunction with automatic fire suppression and detection capability for each redundant train of safe shutdown equipment is based on the following considerations. Automatic suppression is required to ensure prompt, effective application of suppressant to a fire that could endanger safe shutdown capability. The activation of an automatic fire detection or suppression system does not occur until sufficient smoke or heat has been developed by the fire. Therefore, the Commission is requiring a 1-hour barrier to ensure that fire damage will be limited to one train until the fire is extinguished.

These requirements have now been incorporated in Section III.C, "Fire Protection of Safety Functions."

### *Comment Resolution*

Several commenters made a number of suggestions of an editorial nature. One suggestion was to add "or unless other fire protection features have been provided to ensure equivalent protection" in the first paragraph, where three-hour rated fire barriers were stipulated unless a lower rating was justified by the fire hazards analysis. The Commission feels that this adds nothing in the way of clarification and the suggestion was not adopted. The second paragraph requires that structural steel forming a part of or supporting any fire barrier have a fire resistance equivalent to that required of the barrier. An example was given of metal lath and plaster covering as being one means of providing equivalent protection. Several commenters stated that they thought this was too narrow and would be interpreted by some people as the only acceptable method permitted. Since the example seemed to be confusing, a decision has been made to eliminate it. Other comments to the effect that the requirement was excessively restrictive with regard to fire barrier penetrations, including fire doors and their associated frames and hardware, and ventilation systems have been acted upon by the staff and the requirement, as it had affected these items, was deleted.

### *N. Fire Barrier Cable Penetration Seal Qualification.*

**Technical Basis.** Unpierced fire barriers offer the best protection for separating redundant trains of safety-related or safe shutdown equipment. However, these barriers must be pierced for both control and power cables. These penetrations must be sealed to achieve a degree of fire resistance equivalent to that required of the barrier that is pierced. ASTM Standard E-119 is

the national consensus standard used for testing and rating these cable penetration seals. Since the cables conduct the heat through the barrier, and since the cable insulation is combustible, the acceptance criteria of the ASTM Standard E-119 relating to temperature on the unexposed side must be appropriately modified.

### *Comment Resolution*

Some commenters suggested that this entire section be deleted and replaced with the following two sentences: "Penetration seals shall provide the equivalent protection which is required of the fire barrier. Evaluation of the penetration seals based upon a design review and relevant test data or qualification tests may be made." The commenters felt that sufficient test data are available to permit evaluation of design requirements without full-scale mockup testing and that many of the items spelled out in the regulation, such as the water hose stream test, were too detailed and did not belong in the regulation. The Commission has reconsidered this issue and revised the rule to (a) require the use of noncombustible materials only in the construction of fire barrier penetration seals, (b) require fire barrier penetration seals to be qualified by test; and (c) require such tests to satisfy certain acceptance criteria.

### *O. Fire Doors.*

**Technical Basis.** Door openings in fire walls constitute another breach that must be protected. Fire doors that have been tested and rated for certain fire exposures are installed to protect these openings. Fire doors frequently fail to protect the openings in which they are installed because they are not fully closed. Various methods are available to licensees to ensure that fire doors are in proper operating condition and that they will be closed during a fire. These options are listed in Appendix R.

### *Comment Resolution*

Many commenters stated that this requirement is too detailed and should be deleted. Minor editorial changes have been made in order to more clearly state the requirements.

### *P. Reactor Coolant Pump Lubrication System.*

**Technical Basis.** Each reactor coolant pump motor assembly typically contains 140 to 220 gallons of lube oil. Oil leaking from some portions of the lube oil system may come in contact with surfaces that are hot enough to ignite the oil. The resulting fire could be large, and access to the fire would be delayed because of the time required to enter the containment. Containment air temperature

would increase, severe localized environments would develop in the area of the fire, and a large amount of smoke would be generated. These conditions could affect operability of safety-related equipment inside containment.

Therefore, an oil collection system is necessary to confine any oil discharged due to leakage or failure of the lubrication system and to prevent it from becoming a fire hazard by draining it to a safe location. These occurrences could be random or could be seismically induced because the existing lube oil system piping and oil collection systems may not be designed to withstand a design basis seismic event.

Appendix A to BTP APCSB 9.5-1 states that for operating plants,

"postulated fires or fire protection system failures need not be considered concurrent with other plant accidents or the most severe natural phenomena." The basis for that statement is two fold. First, nuclear power plants are massive structures, and essential services are designed to withstand earthquakes and other natural phenomena. Second, the history of many fires associated with recent earthquakes have been evaluated. These evaluations showed that such fires usually are due to failure of piping or tanks of flammable gasses or liquids such as municipal natural gas distribution systems or gasoline storage and/or dispensing stations. Where such potential fire hazards exist in nuclear power plants (e.g., hydrogen for generator cooling, or oil fuel for the emergency diesel generator or station space heating boilers) they are designed and installed to withstand the damaging effects of various natural phenomena, and other special fire protection features are provided as necessary. However, General Design Criterion 2 *Design Bases for Protection Against Natural Phenomena* requires that structures, systems, and components important to safety be designed to withstand the effects of earthquakes without loss of capability to perform their safety function. Regulatory Guide 1.29, "Seismic Design Classification," describes an acceptable method for identifying and classifying those features of light-water-cooled nuclear power plants that should be designed to withstand the effects of the Safe Shutdown Earthquake. In this guide, paragraph C.1 applies to systems that are required to remain functional to ensure heat removal capability; paragraph C.2 applies to systems that do not have to remain functional for that purpose, but whose failure could reduce the functioning of those systems covered by paragraph C.1. The reactor coolant

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pump oil collection system is covered by paragraph C.2 because its function is required to protect safety-related systems rather than to perform a safety function. Because the failure of the oil collection system for a seismically induced oil fire should not prevent a safety-related system from performing its safety function (Regulatory Guide 1.29, "Seismic Design Classification," paragraph C.2), the oil collection system should be designed, engineered, and installed so that its failure will not lead to a fire affecting safety-related equipment as a result of an earthquake.

The proposed rule permitted two alternatives—an oil collection system or an automatic fire suppression system. We have deleted the alternative of the suppression system because unacceptable damage may result to the safety-related systems from the burning of oil before the suppression system is actuated and because the fire water supply system is not designed to withstand seismic events. In addition, these pumps are located within the biological shield inside containment, therefore, timely fire brigade action would be difficult if the suppression system malfunctions. Further, if the suppression system becomes inoperable during operation, a fire watch or patrol cannot enter the area during operation.

### *Comment Resolution*

A number of commenters suggested that this section is too detailed and should be substantially modified. This requirement was changed to delete the option of protecting the reactor coolant pump lubrication system with an automatic fire suppression system. We have modified the rule to indicate that the requirement that the oil collection system be designed to provide reasonable assurance that it will withstand the Safe Shutdown Earthquake can be met by satisfying paragraph C.2. of Regulatory Guide 1.29, "Seismic Design Classification," as described above.

### *Q. Associated Circuits.*

*Technical Basis.* When considering the consequences of a fire in a given fire area during the evaluation of safe shutdown capabilities of a plant, the staff must be able to conclude that one train of equipment that can be used immediately to bring the reactor to a hot shutdown condition remains unaffected by that fire. The staff must also be able to conclude that damage to one train of equipment used for achieving cold shutdown will be limited so that the equipment can be returned to an operable condition within 72 hours. (See Technical Basis for Section III.G, "Protection of Safe Shutdown

Capability.") In the fire hazards analysis for a plant, the equipment relied upon to perform both functions must be identified for each fire area. It follows that any associated non-safety circuits in the fire area that could adversely affect the identified shutdown equipment by feeding back potentially disabling conditions (e.g., hot shorts or shorts to ground) to the power supplies or control circuits of that equipment must also be evaluated. Of course such disabling conditions must be prevented to provide assurance that the identified safe shutdown equipment will function as designed. These requirements have now been incorporated in Section III.L, "Alternative and Dedicated Shutdown Capability."

### *Comment Resolution*

Many commenters stated that this requirement should be deleted because many older plant designs did not consider associated circuits and this is, therefore, a new design requirement. The commenters felt that the analysis that will be required to satisfy this requirement will be both long and complicated and the requirement should therefore be deleted.

The Commission rejected these suggestions for the following reasons.

1. Virtually all of the fire protection modifications made to date have been required to correct deficiencies that resulted from lack of consideration of certain specific items during initial design and construction.

2. The Browns Ferry fire showed the necessity of divisional separation of the associated circuit of the control cables to prevent the disabling of safety systems by a single fire. This has been discussed with licensees during evaluations of alternative and dedicated shutdown capability and is necessary to ensure that safe shutdown systems will be able to function properly in the event of fire.

3. The staff considers incomplete any fire hazard analysis that does not consider the effects of fire damage to circuits that are associated with safe shutdown systems.

As indicated above, as a result of the comments received on this issue, it is unclear that associated circuits have in fact been adequately considered by licensees in their reviews using the guidance of Appendix A to BTP APCSB 9.5-1. To ensure that the associated circuits are considered, all operating nuclear power plants will be required to meet the requirements of Section III.G of Appendix R.

### *General Comments Resolution:*

Several commenters contended that Commission regulations mandate that an adjudicatory hearing be conducted prior to a final decision. One commenter labeled the regulation an "order" within the meaning of the Administrative Procedure Act (5 U.S.C. 551(6)) (APA) and asserted that 10 CFR 2.204 of the Commission's regulations, "Order for Modification of License," applies to this rulemaking proceeding.

The Commission disagrees with these comments. A "rule" is defined in the APA to mean "the whole or a part of an agency statement of general or particular applicability and future effect designed to implement \* \* \* or prescribe law or policy \* \* \*" (5 U.S.C. 551(4)). The agency action questioned here is clearly one that treats similarly situated licensees equally and that prescribes future conduct or requirements. For those licensees who have not already provided an equivalent level of fire protection, certain specific fire protection features are required. Various of these requirements would apply to approximately 40 facilities. The commenter's characterization of the rule as an order, along with the assertion that 10 CFR 2.204 mandates a hearing before the rule becomes final is incorrect. On its face, that regulation (which does grant a hearing right) applies only to Commission orders that modify a license.<sup>2</sup> It does not apply to requirements promulgated through a rulemaking action conducted in accordance with the requirements of applicable law.

Several commenters contended that the environmental impact had not been adequately addressed. One commenter, citing the requirements in Section III.A of Appendix R for two water supplies and two separate redundant sections as examples of requirements involving environmental issues, contended that the Commission relied upon its staff's "unsupported determination that, pursuant to 10 CFR § 51.5(d), an environmental impact statement, appraisal, or negative declaration is not required." The Commission has considered Section III.A and has further considered the remaining requirements of Appendix R and remains convinced that the regulations are not substantive and are insignificant from the standpoint of environmental impact.

One commenter suggested that all plants be required to install dedicated

<sup>2</sup> It should also be noted that § 2.204 is codified in Subpart B of 10 CFR Part 2. The scope of Subpart B is specifically limited to "cases initiated by the staff \* \* \* to impose requirements by order on a licensee" (10 CFR 2.200(a)). (Emphasis supplied.)

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shutdown capability. The Commission does not agree. We believe that the Commission's overall fire protection program involving extensive plant-specific fire protection modifications that are based on guidance set forth in Branch Technical Position BTP APCSB 9.5-1 and its Appendix A and the specific requirements of Appendix R to resolve disputed issues provide adequate fire protection.

One commenter stated that the ambiguity of the proposed regulation with regard to critical items requires that it be renoticed. The commenter referenced three portions of the proposed Appendix R as examples of such ambiguity. They were Section III.G, Section III.N, and Section III.Q. We have reviewed these examples.

In reference to the first example, the commenter stated that the first paragraph of Section III.G identifies alternative shutdown capability as an optional protective feature and that paragraph III.G.2.c then identifies alternative shutdown capability as a minimum fire protection feature. We do not agree with this statement. The first paragraph of Section III.G identifies alternative shutdown capability as one option in a combination of fire protection features for a specific fire area. Paragraph III.G.3 indicates when this option should be used.

In reference to the second example, the commenter stated that Section III.N requires a pressure differential across the test specimen during the testing of fire barrier penetration seals but fails to define the pressure differential. This comment is incorrect. The pressure differential called for by the proposed provision was the maximum pressure differential that the barrier would experience in the specific plant installation. In any event, the requirement for pressure differential during such testing has been deleted since only noncombustible material is now being used for such seals.

In reference to the third example, the commenter stated that Section III.Q is totally lacking in definition. We do not agree. Footnote 6 references Regulatory Guide 1.75 and IEEE Std 384-1974. The latter document is a commonly used industry standard that defines associated circuits and provides guidance for ensuring that such circuits do not compromise the independence of the shutdown circuits they are associated with.

Based on the above examples and our review of the other provisions of the proposed rule, we do not believe that the rule as proposed was ambiguous so as to require renoticing. Moreover, it should be noted that, based on other

comments received on the proposed regulations, other commenters demonstrated a thorough understanding of the proposed requirements.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that the following amendments to Title 10, Chapter I, Code of Federal Regulations, Part 50, are published as a document subject to codification.

➤ 45 FR 76968  
Published 11/21/80  
Effective 2/4/81

*Criteria and Procedures  
for Determining Eligibility  
for Access to or Control  
Over Special Nuclear Material*

See Part 11 Statements of Consideration





## PART 70 • STATEMENTS OF CONSIDERATION

**Register.** Based on the public comments and other considerations, the Commission has adopted the proposed amendments, with modifications as set forth below.

The effective physical protection amendments are designed to have overall equivalency to the recommendations of INFCIRC/225 Rev. 1, but there are differences in the detailed requirements. INFCIRC/225 Rev. 1 recommendations are designed to minimize the possibilities of theft or sabotage of SNM of moderate or low strategic significance. The effective amendments have been primarily designed to require early detection of theft of SNM of moderate or low strategic significance. However, in requiring early detection capabilities, these amendments deter the possibilities of theft or diversion. In the judgment of the Commission, the degree of protection afforded by the containment, monitoring and detection procedures required by these amendments provide equivalency to the INFCIRC/225 Rev. 1 recommendations for protection of theft or diversion of SNM.

Significant differences from the proposed rule published for comment on May 24, 1978 are: (1) Plutonium-Beryllium (PuBe) sealed sources would be exempted from the physical protection requirements; (2) Plutonium with isotopic concentration exceeding 80 percent in plutonium-238 would be exempted from the physical protection requirements; (3) package and vehicle search requirements at facilities where special nuclear material of moderate strategic significance is used or stored have been changed; (4) The period of time allotted for submittal of a licensee plan to implement these requirements has been changed from 60 days to 120 days after the effective date of the amendment. In addition, editorial and clarifying changes were made and some definitions added to clarify the intent of the regulations.

The following discussion pertains to items (1) through (4) above.

(1) PuBe sealed sources—Commenters stated that the cost of providing the required physical protection for PuBe sealed sources would be prohibitive from the point of view of the limited budgets available at universities where most of the sources are now located. Imposition of the proposed requirements, it was said, would result in the curtailment of the use of PuBe sources at some sites with a significant impact on the educational and research programs at those institutions. In view of the very small quantities of plutonium found in PuBe sealed sources (generally, from 16 to 161 grams) and the fact that

potential adversaries wishing to obtain a 5 kg formula quantity of plutonium would have to commit separate acts of theft at a large number of widely separated sites without being detected, the Commission has decided that the threat to the common defense and security of this country was sufficiently low that physical security measures should not be required for PuBe sealed sources. There is an upper limit of 500 grams of plutonium to which this exemption can be applied because greater than a 500 gram accumulation of plutonium in this form invalidates the basis for this exemption. IAEA guidelines allow for such exceptions in the case of research type facilities.

(2) More than 80 percent Pu-238—The proposed rule has been amended to reflect that plutonium with isotopic concentration exceeding 80 percent in plutonium-238 would be exempted from the physical protection requirements. This change corrects an oversight in the initially proposed amendments in which it was intended that such material would be exempted to be consistent with the definitions of Category II and III material in the IAEA document INFCIRC/225/Rev. 1.

(3) Search requirements—Package and vehicle search requirements at facilities at which special nuclear material of moderate strategic significance is used or stored have been changed. As revised, random searches are only required regarding items leaving controlled access areas, and not of those entering. The primary objective of entry searches is to detect materials which could be useful in sabotage. Since protection against sabotage is not within the scope of the proposed amendments, an entry search requirement is not necessary.

(4) Submission and Implementation of Plans—Several commenters stated that more time would be needed than the sixty days allowed for submission of physical security plans, or amendments to them, following the date the proposed amendments become effective.

The Commission agrees that more time may be required, especially in the case of licensees who have limited managerial and financial resources, and has changed the submission date to be 120 days following the effective date of the amendment. In addition, the licensee is now required to implement the approved security plan within 240 days following the effective date of the amendment or within 30 days after the plan is approved, whichever is later.

Concurrent with the publication of the amendments, the NRC is publishing a guide entitled "Standard Format and Content for the Licensee Physical Security Plan for the Protection of

Special Nuclear Material of Moderate or Low Strategic Significance." The guide is being published for a sixty-day comment period and will be reissued with comments taken into consideration. The amendments to 10 CFR Parts 70, 73 and 150 would become effective at this time (120 days after publication) (November 21, 1979). Licensees would therefore have 240 days after publication of the amendments to submit their plans. The plan would have to be implemented 30 days after approval by the Commission or 360 days after (date of publication in the *Federal Register*) (July 24, 1979).

Another area of comment dealt with employee screening. Some of the licensees interpreted the screening requirement to call for a full field background investigation of all personnel entering the controlled access areas where the material is used or stored. The wording of the rule has been revised to more clearly indicate that the requirement is merely one requiring a screening based on knowledge of persons permitted access rather than a formal security investigation. The guidance package being issued with the rule explains more fully the intent of this requirement.

There was one other area of comment for which no specific changes were made to the amendments but which is of significance. These comments dealt generally with the technical justification for the proposed amendments.

Many of the commenters questioned the technical justification for the proposed amendments on the basis of the lack of detailed information regarding the threat; the additional costs

of implementation they perceived to be incommensurate with only marginal improvements in physical protection; and the impacts on the licensees' ongoing educational and research programs. Particular attention was focuses by some commenters on the physical protection requirements for low enriched uranium.

The technical justification for the U.S. adoption of the proposed amendments is contingent on both domestic and international factors, which are closely interrelated. Current NRC physical protection regulations apply primarily to strategic special nuclear material (uranium enriched in the isotope U-235 to 20% or greater, U-233, and plutonium) in quantities of five formula kilograms or greater. There are no specific physical protection requirements for quantities in lesser amounts. Yet, it can be properly argued that a 4.9 formula kilogram quantity of SNM is about as important a quantity as 5.0 kilograms. Multiple thefts of such materials in close to formula quantities could result in the

## PART 70 • STATEMENTS OF CONSIDERATION

accumulation of more than a formula quantity. The proposed detection requirements are considered to provide sufficient protection with minimum added cost so as not to affect educational and research programs. Since the requirements are of a detection nature rather than prevention, characterization of the adversary in the regulations was deemed not to be necessary.

In regard to low enriched uranium (LEU) (enrichments less than 20%), clandestine enrichment to higher levels may go beyond the capability of subnational terrorists, but it does not go beyond the capability of other governments. Unless properly safeguarded, low enriched uranium could be stolen on behalf of foreign governments and enriched to explosive useable levels after it is smuggled out of the U.S.

The Nuclear Non-Proliferation Act of 1978 specifies that NRC shall promulgate regulations which assure that physical security measures are provided to special nuclear materials exported from the United States without specifying whether the materials are low enriched uranium or high enriched uranium. Pursuant to this legislation, the Commission has promulgated 10 CFR Part 110.43 which provides among other things that:

"(b) Commission determinations on the adequacy of physical security programs in recipient countries for Category II and III quantities of material will be based on available relevant information and written assurances from the recipient country or group of countries that physical security measures providing a minimum protection comparable to that set forth in INFCIRC/225 will be maintained."

While the proposed amendments would provide a needed extension of domestic physical protection to special nuclear materials for which the level of physical protection required was not previously specified, the full value of such protection could not be realized until similar protection is afforded all such material among the nations utilizing such materials. Physical protection measures similar to those proposed, which are based on the recommendations of the IAEA Information Circular INFCIRC/225/Rev. 1, have already been adopted by several countries.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Parts 70, 73, and 150 are published as a document subject to codification.

44 FR 47918  
Published 8/16/79  
Effective 9/17/79

*Licensing of Production and Utilization Facilities; Facilities and Access for Resident Inspection*

See Part 50 Statements of Consideration.

44 FR 68184  
Published 11/28/79  
Effective 3/25/80

*Physical Protection Upgrade Rule*

See Part 73 Statements of Considerations.

45FR14190  
Published 3/5/80  
Effective 3/5/80

*Minor and Clarifying Amendments*

See Part 1 Statements of Consideration

45 FR 18905  
Published 3/24/80  
Effective 3/24/80

*Deletion of reference to Panama Canal Zone; Minor Amendments*

See Part 4 Statements of Consideration.

45 FR 50705  
Published 7/31/80  
Effective 7/31/80

*Safeguards on Nuclear Material-  
Implementation of US/IAEA Agreement*

See Part 75 Statements of Consideration .

45 FR 55402  
Published 8/19/80  
Effective 11/3/80

*Emergency Planning*

See Part 50 Statements of Consideration

45 FR 65521  
Published 10/3/80  
Effective 11/17/80

*Uranium Mill Licensing Requirements*

See Part 30 Statements of Consideration

45 FR 73012  
Published 11/4/80  
Effective Date: Upon the US/IAEA Safeguards Agreement's entry into force and publication of notice thereof in the Federal Register

*Safeguards on Nuclear Material;  
Implementation of US/IAEA Agreement*

See Part 75 Statements of Consideration

45 FR 74693  
Published 11/12/80  
Effective 11/28/80

*Licensing Requirements for the Storage of Spent Fuel in an Independent Fuel Spent Storage Installation*

See Part 72 Statements of Consideration

➤ 45 FR 76968  
Published 11/21/80  
Effective 2/4/81

*Criteria and Procedures for Determining Eligibility for Access to or Control Over Special Nuclear Material*

See Part 11 Statements of Consideration

## PART 72 • STATEMENTS OF CONSIDERATION

license for storage of spent fuel in an ISFSI; § 51.5(b)(5) for issuance of a renewal license for storage of spent fuel in an ISFSI; and § 51.5(b)(9) for issuance of an initial license for storage of spent fuel in an ISFSI on the site of a nuclear power reactor. These environmental impact assessments will include an evaluation of feasible alternatives. However, since the site selection process for an existing facility has already been completed, no comparative review of alternative sites will be required unless there is new information which could alter the original site evaluation findings. In practice, this means that alternative sites need not be reviewed and that the existing facility would be rejected for siting considerations only if the site involved found to be unsuitable with respect to either safety or environmental impact considerations.

An application for renewal of the license for the G.E.—Morris facility under 10 CFR Part 70 was received on February 27, 1979 and has been under review since that time. As 10 CFR Part 72 has become effective prior to completion of this licensing action, such licensing action will proceed pursuant to 10 CFR Part 72 which is specifically designed to cover spent fuel storage in an ISFSI. This is expected to result in some procedural delays in the G.E.—Morris proceedings.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following new Part 72 and related conforming amendments of Parts 51, 70, 73 and 150 to Chapter I of Title 10, of the Code of Federal Regulations are published as a document subject to codification.

installation (ISFSI). The effective date was inadvertently printed as November 28, 1980. This document corrects the error and publishes the effective date of December 12, 1980.

**DATE:** Part 72 is effective December 12, 1980.

**FOR FURTHER INFORMATION CONTACT:**  
John D. Philips, Chief, Rules and Procedures, Office of Administration,  
Nuclear Regulatory Commission,  
Washington, DC 20555, (301) 492-7086.

➤ 45 FR 78623  
Published 11/26/80  
Effective 12/12/80

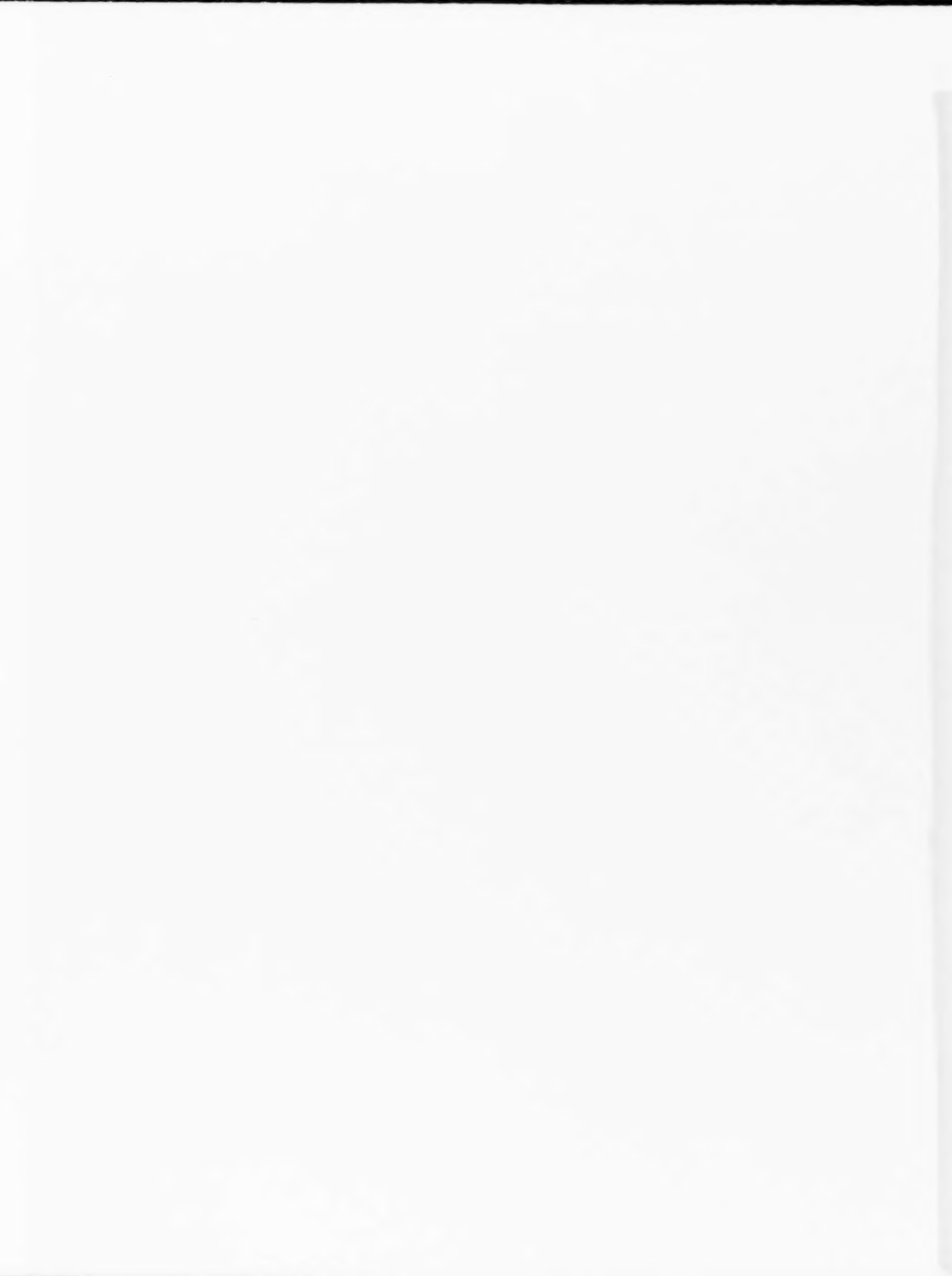
### 10 CFR Part 72

#### Licensing Requirements for the Storage of Spent Fuel in an Independent Fuel Spent Storage Installation; Correction

**AGENCY:** Nuclear Regulatory  
Commission.

**ACTION:** Final rule; correction.

**SUMMARY:** In a Federal Register document published on November 12, 1980 (45 FR 74693), the NRC added a new Part 72 to its regulations to cover the specific licensing requirements for the storage of spent fuel in an independent spent fuel storage





DEC 9 1 1980

341-364  
C-325

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Y3.N88:6/980/Supp.7

UNITED STATES NUCLEAR REGULATORY COMMISSION

RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

9407

2121

SUPPLEMENT NUMBER

7

DATE ISSUED:

(December 1, 1980 - December 12, 1980)

December 15, 1980

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Prepared by  
Division of Rules and Records, Office of Administration  
Nuclear Regulatory Commission, Washington, D.C. 20555 (Tel. 301/492-7086)

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**UNITED STATES NUCLEAR REGULATORY COMMISSION**  
**RULES and REGULATIONS**  
**TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY**

**PART**  
**1**

**STATEMENT OF ORGANIZATION**  
**AND GENERAL INFORMATION**

**Subpart A—Introduction**

- Sec.**  
**1.1** Creation and authority.  
**1.2** Sources of additional information.  
**1.3** Location of principal offices and regional offices.

**Subpart B—Headquarters**

- 1.10** The Commission.  
**PANELS, BOARDS, AND COMMITTEES**  
**1.11** Atomic Safety and Licensing Board Panel.  
**1.12** Atomic Safety and Licensing Appeal Panel.  
**1.20** Advisory Committee on Reactor Safeguards.  
**1.21** Other committees, boards and panels.

**COMMISSION STAFF**

- 1.30** Office of Inspector and Auditor.  
**1.31** Office of Policy Evaluation.  
**1.32** Office of the General Counsel.  
**1.33** Office of the Secretary.  
**1.34** Office of Public Affairs.  
**1.35** Office of Congressional Affairs.

**EXECUTIVE DIRECTOR**

- 1.40** Office of the Executive Director for Operations.

**STAFF OFFICES**

- 1.41** Office of Administration.  
**1.42** Office of the Executive Legal Director.  
**1.43** Office of the Controller.  
**1.44** Office of Equal Employment Opportunity.  
**1.45** Office of Planning and Analysis.  
**1.46** Office of International Programs.  
**1.47** Office of State Programs.  
**1.48** Office of Management Information and Program Control.

**PROGRAM OFFICES**

- 1.50** Office of Nuclear Material Safety and Safeguards.  
**1.51** Office of Nuclear Reactor Regulation.  
**1.52** Office of Nuclear Regulatory Research.  
**1.53** Office of Standards Development.  
**1.54** Office of Inspection and Enforcement.

**Subpart C—NRC Seal and Flag**

- 1.60** Description and custody of NRC seal.  
**1.61** Use of NRC seal or replicas.  
**1.62** Establishment of official NRC flag.  
**1.63** Use of NRC flag.  
**1.64** Report of violations.

**AUTHORITY:** Sec. 161, Pub. L. 93-703, 68 Stat. 948 (42 U.S.C. 2201); secs. 201, 202, 204, 205, and 206, Pub. L. 93-438, 98 Stat. 1242, 1244, 1245, 1246, and 1248 (42 U.S.C. 5841, 5843, 5844, 5845, and 5849); Pub. L. 94-79, 80 Stat. 413; and 5 U.S.C. 552 and 553.

**Subpart A—Introduction**

**§ 1.1 Creation and authority.**

(a) The Nuclear Regulatory Commission was established by the Energy Reorganization Act of 1974, as amended, Pub. L. 93-438, 88 Stat. 1233 (42 U.S.C. 5801 et seq.). This Act abolished the Atomic Energy Commission and, by section 201, transferred to the Nuclear Regulatory Commission all the licensing and related regulatory functions assigned to the Atomic Energy Commission by the Atomic Energy Act of 1954, as amended, Pub. L. 83-703, 68 Stat. 919 (42 U.S.C. 2011 et seq.). These functions included those of the Atomic Safety and Licensing Board Panel and the Atomic Safety and Licensing Appeal Panel. The Energy Reorganization Act became effective January 19, 1975 (E.O. 11834).

(b) As used in this part, "Commission" means the five members of the Nuclear Regulatory Commission or a quorum thereof sitting as a body, as provided by section 201 of the Energy Reorganization Act of 1974, as amended. "NRC" means the Nuclear Regulatory Commission, the agency established by Title II of the Energy Reorganization Act of 1974, as amended, comprising the members of the Commission and all offices, employees, and representatives authorized to act in any case or matter.

**§ 1.2 Sources of additional information.**

(a) The definitive statement of the NRC's organization, policies, procedures, assignments of responsibility, and delegations of authority is in the Nuclear Regulatory Commission Manual and other elements of the NRC's Management Directives System, including local directives issued by Regional Offices. Copies of the Manual, other elements of the Management Directives System, and agency operating procedures that affect the public are available for public inspection and copying at the NRC Public Document Room, 1717 H Street NW., Washington, D.C. and at each of NRC's Regional Offices. Information may also be obtained from the Office of Public Affairs or from Public Affairs Officers at the Regional Offices.

(b) Commission meetings are open to the public, as provided by the Government in the Sunshine Act, unless they fall within an exemption to the Act's

openness requirement and the Commission also has determined that the public interest requires that those particular meetings be closed. Information concerning Commission meetings may be obtained from the Office of the Secretary.

(c) Information regarding the availability of NRC records under the Freedom of Information Act and the Privacy Act of 1974 may be obtained from the Division of Rules and Records, Office of Administration. NRC's regulations are published in the *FEDERAL REGISTER* and codified in Title 10 of the Code of Federal Regulations. They are also published in "NRC Rules and Regulations," available on a subscription basis from the Superintendent of Documents, U.S. Government Printing Office. Final opinions made in the adjudication of cases are published in "Nuclear Regulatory Commission Issuances," available on a subscription basis from the National Technical Information Service, Springfield, Va. 22161.

**§ 1.3 Location of principal offices and Regional Offices.**

(a) The principal NRC offices are located in the Washington, D.C., area. Facilities for the service of process and papers are maintained within the District of Columbia at 1717 H Street NW. The mailing address for all NRC Headquarters offices is Washington, D.C. 20555. The locations of NRC offices in the Washington area are:

- (1) Metatomic Building, 1717 H Street NW., Washington, D.C.
- (2) Phillips Building, 7930 Norfolk Avenue, Bethesda, Maryland.
- (3) Maryland National Bank Building, 7735 Old Georgetown Road, Bethesda, Maryland.
- (4) Landow Building, 7910 Woodmont Avenue, Bethesda, Maryland.
- (5) Lugenbell Building, 4922 Fairmont Avenue, Bethesda, Maryland.
- (6) East West Towers Building, 4350 East West Highway, Bethesda, Maryland.
- (7) Nicholson Lane Building, 6680 Nicholson Lane, Rockville, Maryland.
- (8) Wilste Building, 7915 Eastern Avenue, Silver Spring, Maryland.

(b) The addresses of the NRC Regional Offices (see § 1.64) are:

- Region I, USNRC,** 631 Park Avenue, King of Prussia, Pennsylvania 19406.  
**Region II, USNRC,** 101 Marietta Street, Suite 3100, Atlanta, Ga. 30303.\*  
**Region III, USNRC,** 799 Leesville Road, Glen

\*Amended 43 FR 32741.

## PART I • STATEMENT OF ORGANIZATION AND GENERAL INFORMATION

Ely, Illinois 60137.  
Region IV, USNRC, 611 Ryan Plaza Drive,  
Suite 1000, Arlington, Texas 76012.  
Region V, USNRC, 1990 North California  
Boulevard, Suite 202, Walnut Creek, Cal-  
ifornia 94696.

### Subpart B—Headquarters

#### § 1.10 The Commission.

(a) The Nuclear Regulatory Commis-  
sion, composed of five members, one of  
whom is designated by the President as  
Chairman, is established pursuant to  
section 201 of the Energy Reorganization  
Act of 1974, as amended. The Chairman  
is the principal executive officer of the  
Commission, and exercises its executive  
and administrative functions with re-  
spect to appointment and supervision of  
personnel, except as otherwise provided  
by the Energy Reorganization Act of  
1974, as amended; distribution of busi-  
ness; use and expenditure of funds  
(except that the function of revising  
budget estimates and purposes is re-  
served to the Commission); and appoint-  
ment, subject to approval of the Commis-  
sion, of heads of major administrative  
units under the Commission.

(b) The following staff units and  
officials report directly to the Commis-  
sion: Atomic Safety and Licensing  
Board Panel, Atomic Safety and Licen-  
sing Appeal Panel, Office of Inspector and  
Auditor, Office of Policy Evaluation, Of-  
fice of the General Counsel, Office of the  
Secretary, Office of Public Affairs, Office  
of Congressional Affairs, the Executive  
Director for Operations, and other com-  
mittees and boards which are authorized  
or established specifically by the Act. The  
Directors of the Offices of Nuclear Re-  
actor Regulation, Nuclear Material  
Safety and Safeguards, and Nuclear  
Regulatory Research may communicate  
with and report directly to the Commis-  
sion, under the provisions of section 209  
of the Energy Reorganization Act of  
1974. The Advisory Committee on Re-  
actor Safeguards also reports directly to  
the Commission.

### PANELS, BOARDS, AND COMMITTEES

#### § 1.11 Atomic Safety and Licensing Board Panel.

The Atomic Safety and Licensing  
Board Panel is the organizational group  
from which Atomic Safety and Licensing  
Boards are selected. These three-  
member boards, named in accordance  
with the provisions of section 191 of the  
Atomic Energy Act, conduct such  
hearings as the Commission may  
authorize or direct, make such  
intermediate or final decisions as the  
Commission may authorize in  
proceedings to grant, suspend, revoke,  
or amend licenses or authorizations, and  
perform such other regulatory functions  
as the Commission may specify. The  
Panel develops procedures and makes  
recommendations to the Commission  
regarding activities of the hearing  
boards. The Panel shall be comprised of  
a Chief Administrative Judge who shall  
be Chairman and such other  
Administrative Judges as may be  
appointed members of the Panel.

#### § 1.12 Atomic Safety and Licensing Appeal Panel.

The Atomic Safety and Licensing  
Appeal Panel is the organizational group  
from which Atomic Safety and Licensing  
Appeal Boards are selected. Under  
powers delegated by the Commission,  
these three-member Boards exercise the  
authority and perform the regulatory  
review functions which would otherwise  
be exercised and performed by the  
Commission. They perform these  
functions in proceedings on licenses  
under 10 CFR Part 50, and such other  
licensing proceedings as the  
Commission may specify, reviewing  
initial decisions and other issuances of  
Atomic Safety and Licensing Boards and  
other presiding officers. The Panel shall  
be comprised of a Chief Administrative  
Judge who shall be Chairman and such  
other Administrative Judges as may be  
appointed members of the Panel.

## PART I • STATEMENT OF ORGANIZATION AND GENERAL INFORMATION

### § 1.20 Advisory Committee on Reactor Safeguards.

The Advisory Committee on Reactor Safeguards was established by Section 29 of the Atomic Energy Act of 1954, as amended, and transferred to the NRC pursuant to the Energy Reorganization Act of 1974, as amended. The Committee reviews safety studies, and applications for construction permits and operating licenses for production and utilization facilities, and makes reports thereon; advises the Commission with regard to the hazards of proposed or existing nuclear facilities and the adequacy of proposed reactor safety standards; and reviews matters specifically referred to it by the Commission, including generic issues and proposed amendments or changes to facility construction permits or operating licenses. Similarly, upon request from the Department of Energy (DOE) the Committee performs reviews, provides reports, and advises DOE with regard to the hazards of DOE nuclear activities and facilities. The Committee on its own initiative may conduct reviews of specific generic matters or nuclear facility safety-related items.

### § 1.21 Other committees, boards, and panels.

Pursuant to section 161a. of the Atomic Energy Act of 1954, as amended, the Commission may establish advisory bodies to make recommendations to it. Currently only one such committee is in existence.

(a) The Advisory Committee on Medical Use of Isotopes (ACMI) was established by the Atomic Energy Commission in July 1958. The ACMI, composed of physicians and scientists, considers medical questions referred to it by the NRC staff, and renders expert opinion regarding medical uses of byproduct material. The ACMI also advises the NRC staff, as requested, on matters of policy regarding licensing of the medical uses of byproduct material.

#### COMMISSION STAFF

### § 1.30 Office of Inspector and Auditor.

The Office of Inspector and Auditor: (a) develops policies and standards governing NRC's financial and management audit program; (b) plans and directs

NRC's long-range comprehensive audit program; (c) conducts NRC's day-to-day internal audit activity; (d) conducts investigations and inspections to ascertain and verify the facts with regard to the integrity of all NRC operations; (e) investigates possible irregularities or alleged misconduct of NRC employees, equal employment opportunity and civil rights complaints, and claims for personal property loss or damage; (f) refers suspected or alleged criminal violations to the Department of Justice, after appropriately informing or consulting with the Office of General Counsel; except that in referrals requiring prompt field response (such as sabotage, terrorism, or theft of special nuclear material), the Office of Inspection and Enforcement shall make direct referral to the Federal Bureau of Investigation and thereafter coordinate with the Office of Inspector and Auditor; (g) under the Commission's "open door" policy, hears individual employee concerns regarding NRC operations and activities, and, as appropriate, investigates such concerns; (h) maintains liaison with the General Accounting Office and other audit organizations; (i) maintains liaison with the Department of Justice and other law enforcement agencies in criminal and other investigative matters; and (j) provides reports and recommendations to the Commission on the results of its audits, investigations, and inspections.

### § 1.31 Office of Policy Evaluation.

The Office of Policy Evaluation: (a) provides for the Commission an independent evaluation of program policy objectives; (b) reviews staff issue papers and policy recommendations to determine if they are complete, balanced, and consistent with Commission guidance; (c) provides independent technical evaluation of selected cases presented to the Commission for adjudication; (d) conducts analyses and studies as requested by the Commission or on a self-initiated basis; (e) contributes technical and policy advice and guidance, as needed, for studies and projects being conducted and managed by other NRC offices or outside agencies.

### § 1.32 Office of the General Counsel.

The Office of the General Counsel: (a) provides legal advice and assistance to the Commission and Commission officer with respect to all activities of the NRC; (b) reviews Atomic Safety and Licensing Appeal Board decisions and rulings, decisions reached by staff offices under 10 CFR 2.208, petitions received from members of the public seeking direct Commission action, and rulemaking proceedings involving hearings; and prepares decisions, orders, and rulings for the Commission on these matters; (c) represents, and protects the interests of, the NRC in court proceedings, and in dealings with other government agencies, committees of Congress, foreign governments, and members of the public; (d) coordinates and prepares legislative materials in connection with legislation initiated by the NRC and legislations submitted to it for comment; (e) pro-

vides advice with respect to questions raised under the conflict of interest laws, Freedom of Information Act, Federal Advisory Committee Act, and Government in the Sunshine Act; (f) provides official written interpretations of the Commission's rules; and (g) performs other functions assigned by the Commission.

### § 1.33 Office of the Secretary.

The Office of the Secretary: (a) develops policies and procedures, and provides secretariat services for the conduct of Commission business and implementation of Commission decisions, including scheduling of Commission business and recording of meetings; (b) issues decisions, orders, and rulings of the Commission, and maintains the official docket of the Commission; and (c) directs and administers the NRC Public Document Room.

### § 1.34 Office of Public Affairs.

The Office of Public Affairs: (a) develops policies and administers programs at NRC headquarters and Regional Offices to inform the public and the news media about NRC policies, programs, and activities; (b) and keeps NRC management informed on media coverage of activities of interest to the agency.

### § 1.35 Office of Congressional Affairs.

The Office of Congressional Affairs: (a) provides advice and assistance to the Commission and NRC staff on all NRC relations with the Congress, and informs them concerning the views of Congress toward NRC policies, plans, and activities; (b) maintains liaison with congressional committees and members of Congress on matters of interest to NRC, and keeps Congress informed on NRC plans, policies, and activities; (c) serves as the contact point for all NRC communications with Congress, reviewing and concurring in all outgoing correspondence to members of Congress and congressional committees; and (d) monitors legislative matters of interest to NRC, and participates in planning and developing NRC's legislative programs.

#### EXECUTIVE DIRECTOR

### § 1.40 Office of the Executive Director for Operations.

The Executive Director for Operations (EDO) is appointed by the Commission, pursuant to the Energy Reorganization Act of 1974, as amended, and performs such functions as the Commission may direct, including the following:

(a) Provides the Commission with assistance on policy, management, and operational matters. Submits to the Commission for approval such appointments as the Commission shall designate, including Directors of certain divisions and offices. Submits for approval significant changes in the organization.

(b) Supervises and coordinates policy development and operational activities of the following line offices: The Office of Nuclear Reactor Regulation, the Office of Nuclear Material Safety and Safeguards, the Office of Nuclear Regulatory

## PART I • STATEMENT OF ORGANIZATION AND GENERAL INFORMATION

Research, the Office of Inspection and Enforcement, and the Office of Standards Development; and the following staff offices: the Office of Administration, the Office of International Programs, the Office of State Programs, the Office of the Controller, the Office of the Executive Legal Director, the Office of Planning and Analysis, the Office of Management Information and Program Control, the Office of Equal Employment Opportunity, and such other organizational units as shall be assigned by the Commission. The EDO is also responsible for implementation of the Commission's policy directives pertaining to these offices.

(c) Recommends to the Commission proposed regulations to protect public health and safety and the environment from effects associated with nuclear facilities and materials subject to licensing; to provide for security of licensed nuclear facilities and safeguarding of licensed radioactive materials; and to assure that activities under facility licenses would not be inconsistent with antitrust laws, as specified in section 105a. of the Atomic Energy Act of 1954, as amended.

(d) Issues proposed amendments to regulations and amendments in final form, where the amendments are corrective or of a minor or nonpolicy nature and do not substantially modify existing regulations; and issues amendments of regulations in final form, if no significant adverse comments or questions have been received on the notice of proposed rulemaking and no substantial changes in text are indicated.

(e) Makes determinations, pursuant to 10 CFR Parts 30, 40, 50, and 70, that exemptions of individual prime contractors or subcontractors of the

\* Department of Energy or the NRC from NRC licensing requirements are authorized by law.

(f) Makes for the Commission, after consultation with the Attorney General, the determinations provided for in section 105c.(8) of the Atomic Energy Act of 1954, as amended, in regard to applications for facility construction permits or operating licenses.

(g) Negotiates and signs agreements, arrangements, and contracts with representatives of foreign countries and international organizations.

(h) Designates which facilities, installations, and real property shall be subject to the prohibitions of 10 CFR Part 160, "Trespassing on Commission Property."

(i) Administers the contracting activities of the Commission.

(j) Administers the Commission's equal employment opportunity program.

(k) Develops and maintains the NRC financial management program.

(l) Acts for the Head of the Agency in making determinations required in administering the NRC labor relations program.

(m) Exercises final determination on appeals under the Privacy Act of 1974, and issues minor revisions of systems of records notices.

(n) Exercises final determination on appeals under the Freedom of Information Act except for those pertaining to the Office of the Executive Legal Director or to advisory committees, boards, panels, and offices reporting to the Commission.

(o) Denies, pursuant to part 2 of this chapter, any petition for rulemaking of a minor or nonpolicy nature where the grounds for denial do not substantially modify existing precedent. The EDO is also responsible for notifying the petitioner with a brief statement of the grounds for denial.

(p) Proposes, in response to a petition for rulemaking, an exemption from licensing requirements for any product containing byproduct, source, or special nuclear material when existing policy provides background or precedent. The EDO is also responsible, in issuing in final form an exemption from licensing requirements for any product containing byproduct, source, or special nuclear material, for making the finding authorized under sections 57d or 81 of the act with respect to exemption of special nuclear or byproduct material, or section 62 of the act with respect to unimportant quantities of source material.

### STAFF OFFICES

#### § 1.41 Office of Administration.

The Office of Administration develops and directs policies and programs for personnel administration, organization and management analysis, security and security classification, building management and administrative services, document control, automatic data processing, rules and records, contracting and procurement, and facilities and material license fees.

(a) The Division of Organization and Personnel administers and directs policies, standards, and programs for organization and personnel management activities, including recruitment, training, executive development, staffing services and information, organization and management analysis, labor-management relations, and employee services.

(b) The Division of Security develops, administers, and directs the overall NRC security program; assures the safeguarding of Restricted Data, other National Security Information, and NRC sensitive unclassified matter including NRC telecommunications of significant intelligence value; assures the physical protection of NRC Headquarters buildings, Regional Offices and contractor facilities; and provides advice and assistance on security matters.

(c) The Division of Facilities and Operations Support is responsible for the planning and direction of support programs for facilities and administrative services, including building operations, property, supply, telecommunications, travel, mail, and messenger services.

(d) The Division of Document Control is responsible for planning and di-

recting the production (exclusive of writing and editing) and control of NRC documents. Its responsibilities include: Typing services; publication and graphics; NRC management directives; and document evaluation, dissemination, storage, and retrieval.

(e) The Division of Automatic Data Processing Support Plans, coordinates, and directs development and utilization of NRC computer services and computer facilities for the storage, retrieval, analysis, and dissemination of information; advises and assists in the development and conversion of scientific and analytical programming and the interpretation of automatic data processing procedures; evaluates expected benefits and costs of computer applications; and provides systems development, programming and operation services for NRC offices.

(f) The Division of Rules and Records is responsible for: NRC implementation of the Freedom of Information Act, Privacy Act, and Federal Reports Act; directing and coordinating NRC local public document room activities; publishing "NRC Rules and Regulations" and "Nuclear Regulatory Commission Issuances"; and reviewing and preparing notices and amendments to NRC regulations, including the processing of petitions for rulemaking.

(g) The Division of Contracts develops and implements agency-wide contracting policies and procedures; directs and coordinates contracting and purchasing activities for NRC, including contractor selection, and negotiation, administration, and closeout of contracts; and provides advice and assistance to NRC program officials concerning procurement regulations and requirements.

(h) The License Fee Management Branch is responsible for collecting fees from licensees and applicants for licenses, as required by 10 CFR Part 170, which sets fees for licensing nuclear production and utilization facilities and nu-



## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

(b) An order entered pursuant to paragraph (a) of this section shall be subject to review by the Commission on its own motion within thirty (30) days after its date.

(c) An initial decision may be made effective immediately, subject to review by the Commission on its own motion within thirty (30) days after its date, \*\* except as otherwise provided in this chapter when:

(1) All parties stipulate that the initial decision may be made effective immediately and waive their rights to file exceptions, to request oral argument, and to seek judicial review;

(2) No unresolved substantial issue of fact, law, or discretion remains and the record clearly warrants granting the relief requested; and

(3) The presiding officer finds that it is in the public interest to make the initial decision effective immediately.

(d) The provisions of this section do not apply to an initial decision directing the issuance or amendment of a construction permit or construction authorization, or the issuance of an operating license or provisional operating authorization.

### § 2.761a Separate hearings and decisions.

In a proceeding on an application for a construction permit for a utilization facility which is subject to § 51.5(a) of this chapter, and is of the type specified in §§ 50.21(b) (2) or (3) or 50.22 of this chapter or is a testing facility,† the presiding officer shall unless the parties agree otherwise or the rights of any party would be prejudiced thereby, commence a hearing on issues covered by §§ 50.10(e)(2)(ii) and Part 51 of this chapter as soon as practicable after issuance by the staff of its final environmental impact statement but no later than thirty (30) days after issuance of such statement, and complete such a hearing and issue an initial decision on such matters. Prehearing procedures regarding issues covered by Part 51\* and § 50.10(e)(2)(ii) of this chapter, including any discovery and special prehearing conferences as provided in §§ 2.740, 2.740a, 2.740b, 2.741, 2.742, 2.751a, and 2.752, shall be scheduled accordingly. The provisions of §§ 2.754, 2.755, 2.760, 2.762, 2.763, and 2.764(a) shall apply to any proceeding conducted and any initial decision rendered in accordance with this section. Paragraph 2.764(b) shall not apply to any partial initial

decision rendered in accordance with this section. This section shall not preclude separate hearings and decisions on other particular issues.

### § 2.762 Appeals to the Commission from initial decisions.

(a) Within ten (10)‡ days after service of an initial decision, any party may take an appeal to the Commission by the filing of exceptions to that decision or designated portions thereof. Each exception shall be separately numbered and shall (1) state concisely, without supporting argumentation, the single error of fact or law which is being asserted in that exception; and (2) identify with particularity the portion of the decision (or earlier order or ruling) to which the exception is addressed. A brief in support of the exceptions shall be filed within thirty (30)‡ days thereafter (forty (40)‡ days in the case of the staff). The brief shall be confined to a consideration of the exceptions previously filed by the party and, with respect to each exception, shall specify, inter alia, the precise portion of the record relied upon in support of the assertion of error.

(b) Within thirty (30)‡ days of the filing and service of the brief of the appellant (forty (40)‡ days in the case of the staff), any other party may file a brief in support of, or in opposition to, the exceptions. Each factual assertion made in such supporting or opposing brief shall be supported by a reference to the precise portion of the record upon which it is based.

(c) A brief in excess of ten (10) pages shall contain a table of contents, with page references, and a table of cases (alphabetically arranged), statutes, regulations, and other authorities cited, with references to the pages of the brief where they are cited.

(d) All documents filed under this section shall be accompanied by a certificate reflecting service upon all other parties to the proceeding.

(e) Any exception or brief which in form or content is not in substantial compliance with the provisions of this section may be stricken, either on motion of a party or by the Commission on its own initiative.

### § 2.763 Oral argument.

In its discretion the Commission may allow oral argument upon the request of a party made in his exceptions or brief, or upon its own initiative.

### § 2.764 Immediate effectiveness of initial decision directing issuance or amendment of construction permit or operating license.<sup>1</sup>

(a) Except as provided in paragraph (c) of this section, an initial decision

directing the issuance or amendment of a construction permit, a construction authorization, or an operating license shall be effective immediately upon issuance unless the presiding officer finds that good cause has been shown by a party why the initial decision should not become immediately effective, subject to the review thereof and further decision by the Commission upon exceptions filed by any party pursuant to § 2.762 or upon its own motion.

(b) Except as provided in paragraph (c) of this section, the Director of Nuclear Reactor Regulation or

Director of Nuclear Material Safety and Safeguards, as appropriate, notwithstanding the filing of exceptions, shall issue a construction permit, a construction authorization, or an operating license, or amendments thereto, authorized by an initial decision, within ten (10) days from the date of issuance of the decision.

(c) An initial decision directing the issuance of an initial license for the construction and operation of an independent spent fuel storage installation (ISFSI) under 10 CFR Part 72 of this chapter shall not become effective until review by the Commission has been completed. The Director of Nuclear Material Safety and Safeguards shall not issue an initial license for the construction and operation of an independent spent fuel storage installation (ISFSI) under 10 CFR Part 72 of this chapter until expressly authorized to do by the Commission.

### FINAL DECISION

### § 2.770 Final decision.

(a) The Commission will ordinarily consider the whole record on review, but may limit the issues to be reviewed and consider only findings and conclusions to which exceptions have been filed.

(b) The Commission may adopt, modify, or set aside the findings, conclusions and order in the initial decision, and will state the basis of its action. Its final decision will be in writing and will include:

(1) A statement of findings and conclusions, with the basis for them on all material issues of fact, law or discretion presented;

<sup>1</sup> The temporary suspension of § 2.764 (a) and (b) in certain proceedings and related matters is addressed in Appendix B to this part.

\*Amended 39 FR 26279.

\*\*Added 28 FR 10151.

†Amended 42 FR 22882.

‡Amended 43 FR 17798.



## PART 2 • RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

### EX PARTE COMMUNICATIONS

(2) All facts officially noticed;

(3) The ruling on each material exception;

(4) The appropriate ruling, order, or denial of relief, with the effective date.

#### § 2.771 Petition for reconsideration.

(a) A petition for reconsideration of a final decision may be filed by a party within ten (10) days after the date of the decision. No petition may be filed with respect to an initial decision which has become final through failure to file exceptions thereto.

(b) The petition for reconsideration shall state specifically the respects in which the final decision is claimed to be erroneous, the grounds of the petition, and the relief sought. Within ten (10)\* days after a petition for reconsideration has been filed, any other party may file an answer in opposition to or in support of the petition. However, the staff may file such an answer within twelve (12) days after a petition for reconsideration has been filed.

(c) Neither the filing nor the granting of the petition shall stay the decision unless the Commission orders otherwise.

#### § 2.772 Authority of the Secretary to Rule on Procedural Matters.

When briefs, motions or other papers listed herein are submitted to the Commission itself, as opposed to officers who have been delegated authority to act for the Commission, the Secretary or the Assistant Secretary are authorized to:

(a) Prescribe schedules for the filing of briefs, motions, or other pleadings, where such schedules may differ from those elsewhere prescribed in these rules or where these rules do not prescribe a schedule;

(b) Rule on motions for extensions of time;

(c) Reject motions, briefs, pleadings, and other documents filed with the Commission later than the time prescribed by the Secretary or the Assistant Secretary or established by an order, rule, or regulation of the Commission unless good cause is shown for the late filing;

(d) Prescribe all procedural arrangements relating to any oral argument to be held before the Commission;

(e) Extend the time for the Commission to rule on a petition for review under 10 CFR 2.786(b); (f) Extend the time for the Commission to grant review on its own motion under 10 CFR 2.786(a); and (g) Extend time for Commission review on its own motion of a Director's denial under 10 CFR 2.206(c).

#### § 2.780 Ex parte communications.

(a) Except as provided in paragraph (e) of this section, neither (1) Commissioners, members of their immediate staffs, or other NRC officials and employees who advise the Commissioners in the exercise of their quasi-judicial functions will request or entertain off the record except from each other, nor (2) any party to a proceeding for the issuance, denial, amendment, transfer, renewal, modification, suspension, or revocation of a license or permit, or any officer, employee, representative, or any other person directly or indirectly acting in behalf thereof, shall submit off the record to Commissioners or such staff members, officials, and employees, any evidence, explanation, analysis, or advice, whether written or oral, regarding any substantive matter at issue in a proceeding on the record then pending before the NRC for the issuance, denial, amendment, transfer, renewal, modification, suspension, or revocation of a license or permit. For the purposes of this section, the term "proceeding on the record then pending before the NRC" shall include any application or matter which has been noticed for hearing or concerning which a hearing has been requested pursuant to this part.

(b) Copies of written communications covered by paragraph (a) of this section shall be placed in the NRC public document room and served by the Secretary on the communicator and the parties to the proceeding involved.

(c) A Commissioner, member of his immediate staff, or other NRC official or employee advising the Commissioner in the exercise of their quasi-judicial functions, to whom is attempted any oral communication concerning any substantive matter at issue in a proceeding on the record as described in paragraph (a) of this section, will decline to listen to such communication and will explain that the matter is pending for determination. If unsuccessful in preventing such communication, the recipient thereof will advise the communicator that a written summary of the conversation will be delivered to the NRC public document room and a copy served by the Secretary of the Commission on the communicator and the parties to the proceeding involved. The recipient of the oral communication thereupon will make a fair, written summary of such communication and deliver such summary to the NRC public document room and serve copies thereof upon the communicator and the parties to

the proceeding involved.

(d) This section does not apply to communications authorized by paragraph (e) of this section, to the disposition of ex parte matters authorized by law, or to communications requested by the Commission concerning:

(1) Its proprietary functions;

(2) General health and safety problems and responsibilities of the Commission; or

(3) The status of proceedings.

(e) In any adjudication for the determination of an application for initial licensing, other than a contested proceeding, Commissioners, members of their immediate staffs and other NRC officials and employees who advise the Commissioners in the exercise of their quasi-judicial functions may consult the staff, and the staff may communicate with Commissioners, members of their immediate staffs and other NRC officials and employees who advise the Commissioners in the exercise of their quasi-judicial functions.

(f) The provisions and limitations of this section applicable to Commissioners, members of their immediate staffs, and other NRC officials and employees who advise the Commissioners in the exercise of their quasi-judicial functions are applicable to members of the Atomic Safety and Licensing Appeal Board, members of their immediate staffs, and other NRC officials and employees who advise members of the Appeal Board in the exercise of their quasi-judicial functions.

NOTE: [Deleted 40 FR 2973.]

### ATOMIC SAFETY AND LICENSING APPEAL BOARD

#### § 2.785 Functions of Atomic Safety and Licensing Appeal Boards.

(a) The Commission has authorized Atomic Safety and Licensing Appeal Boards to exercise the authority and perform the review functions which would otherwise have been exercised and performed by the Commission, including, but not limited to, those under §§ 2.760-2.771, 2.912, and 2.913 in (1) proceedings on applications for licenses under Part 50 of this chapter and (2) such other licensing proceedings under the regulations in this chapter as the Commission may specify.

\*Amended 43 FR 17798.

## PART 50 • PROPOSED RULE MAKING

by following the methods of analysis and the required margins of safety of Appendix G of the ASME Code<sup>3</sup> supplemented by the requirements of Section V of this Appendix. In addition, when pressure exceeds 20 percent of the preservice system hydrostatic test pressure, the temperature of the stressed regions of nozzles, flanges and other structural discontinuities shall be at least 150° F above (83° C above) the reference temperature of the material in those regions unless a lower temperature can be justified by showing that the margins of safety for those regions are equivalent to those required for the beltline when it is controlling. The justification submitted for the pressure temperature limits shall describe the methods of analysis used.

3. When the core is critical (other than for the purpose of low-level physics tests) the temperature of the reactor vessel shall not be lower than 40° F above (22° C above) the minimum permissible temperature of paragraph 2. of this section nor lower than the minimum permissible temperature for the inservice system hydrostatic pressure test. An exception may be made for boiling water reactor vessels when water level is within the normal range for power operation and the pressure is less than 20 percent of the preservice system hydrostatic test pressure, in which case the minimum permissible temperature is 60° F above (33° C above) the reference temperature of the closure flange regions that are highly stressed by the bolt preload.

4. If there is no fuel in the reactor during system hydrostatic pressure tests or leak tests, the minimum permissible test temperature shall be  $RT_{MTR} + 60° F$  ( $RT_{MTR} + 33° C$ ).

5. If there is fuel in the reactor during system pressure tests or leak tests, the requirements of paragraphs 2 or 3 shall apply, depending on whether the core is critical during the test.

B. Reactor vessels for which the predicted value of upper shelf energy at end of life is below 50 ft lb or the predicted value of adjusted reference temperature at end of life exceeds 200° F (93° C) shall be designed to permit a thermal annealing treatment to recover material toughness properties of ferritic materials of the reactor vessel beltline.

### V. Inservice Requirements—Reactor Vessel Beltline Material

A. The effects of neutron radiation on the reference temperature and upper-shelf energy of reactor vessel beltline materials, including welds, shall be predicted from the results of pertinent radiation effects studies in addition to the results of the surveillance program of Appendix H.

B. Reactor vessels may continue to be operated only for that service period within which the requirements of Section IV are satisfied using the predicted value of the adjusted reference temperature and the predicted value of the upper-shelf energy at the end of the service period to account for the effects of radiation on the fracture toughness of the beltline materials. These predictions shall be made for the radiation conditions at the tip of the assumed flaw at its deepest part. The highest adjusted reference temperature and the lowest upper-shelf energy level of all the beltline materials

shall be used to verify that the fracture toughness requirements are satisfied.

C. In the event that the requirements of Section V.B. cannot be satisfied, reactor vessels may continue to be operated provided all of the following requirements are satisfied:

1. A volumetric examination of the beltline materials that do not satisfy the requirements of Section V.B. including 100 percent of any associated welds shall be made and any flaws evaluated according to Section XI of the ASME Code and as otherwise specified by the Director of Nuclear Reactor Regulation.

2. Additional evidence of the fracture toughness of the beltline materials after exposure to neutron irradiation shall be obtained from results of supplemental fracture toughness tests.

3. An analysis shall be performed that conservatively demonstrates, making appropriate allowances for all uncertainties, the existence of equivalent margins of safety for continued operation.

D. If the procedures of section V.C. do not indicate the existence of an equivalent safety margin, the reactor vessel beltline may, subject to the approval of the Director of Nuclear Reactor Regulation, be given a thermal annealing treatment to recover the fracture toughness of the material. The degree of recovery shall be measured by testing additional specimens that have been withdrawn from the surveillance program capsules and that have been annealed under the same time-at-temperature conditions as those given the beltline material. The results shall provide the basis for establishing the adjusted reference temperature and upper shelf energy after annealing. The reactor vessel may continue to be operated only for that service period within which the predicted fracture toughness of the beltline region materials satisfies the requirements of Section IV.A. using the values of adjusted reference temperature and upper-shelf energy that include the effects of annealing and subsequent irradiation.

E. The proposed programs for satisfying the requirements of Sections V.C. and V.D. shall be reported to the Director of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20535, for review and approval on an individual case basis at least 3 years prior to the date when the predicted fracture toughness levels will no longer satisfy the requirements of Section V.B.

### Appendix H—Reactor Vessel Material Surveillance Program Requirements

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- I. Introduction
- II. Surveillance Program Criteria
- III. Report of Test Results

#### I. Introduction

The purpose of the material surveillance program required by this appendix is to monitor changes in the fracture toughness properties of ferritic materials in the reactor vessel beltline region of light water nuclear power reactors resulting from their exposure to neutron irradiation and the thermal environment. Under this program, fracture toughness test data are obtained from material specimens exposed in surveillance capsules, which are withdrawn periodically

from the reactor vessel. These data will be used as described in Sections IV and V of Appendix G.

#### II. Surveillance Program Criteria

A. No material surveillance program is required for reactor vessels for which it can be conservatively demonstrated by analytical methods applied to experimental data and tests performed on comparable vessels, making appropriate allowances for all uncertainties in the measurements, that the peak neutron fluence ( $E > 1 \text{ MeV}$ ) at the end of the design life of the vessel will not exceed  $10^{17} \text{ n/cm}^2$ .

B. Reactor vessels that do not meet the conditions of paragraph II.A. shall have their beltline materials monitored by a surveillance program complying with ASTM E 185,<sup>1</sup> except as modified by this Appendix. ASTM E 185 was approved for incorporation by reference by the Director of the Federal Register, on May 29, 1973.

1. That part of the surveillance program conducted prior to the first capsule withdrawal shall meet the requirements of the edition of ASTM E 185 that is current on the issue date of the ASME Code to which the reactor vessel was purchased. For each capsule withdrawal, the test procedures and reporting requirements shall meet the requirements of the edition of E 185 in effect on the date of capsule withdrawal, to the extent practical for the configuration of the specimens in the capsule. For any part of the surveillance program, later editions of E 185 may be used instead of the editions previously specified, but including only those editions through 1979.

2. Surveillance specimen capsules shall be located near the inside vessel wall in the beltline region, so that the specimen irradiation history duplicates to the extent practicable, within the physical constraints of the system, the neutron spectrum, temperature history, and maximum neutron fluence experienced by the reactor vessel inner surface. If the capsule holders are attached to the vessel wall or to the vessel cladding, construction and inservice inspection of the attachments and attachment welds shall be done according to the requirements for permanent structural attachments to reactor vessels given in the ASME Code, Sections III and XI. The design and location of the capsules shall permit insertion of replacement capsules. Accelerated irradiation capsules may be used in addition to the required number of surveillance capsules specified in ASTM E 185.

3. Proposed withdrawal schedules shall be submitted with a technical justification therefor to the Director of Nuclear Reactor Regulation for approval. The proposed schedule shall not be implemented without prior approval.

C. An integrated surveillance program may be considered for a set of reactors that have similar design and operating features. The

<sup>1</sup> Standard Recommended Practice for Surveillance Tests for Light Water Cooled Nuclear Power Reactor Vessels. Copies may be obtained from the American Society for Testing and Materials, 1916 Race St., Philadelphia, Pa. 19103. Copies will be available for inspection at the Commission's Public Document Room, 1717 H St., NW., Washington, D.C.

\* Amended 45 FR 77450

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representative materials chosen for surveillance from each reactor in the set may be irradiated in one or more of the reactors, but there must be an adequate dosimetry program for each reactor. No reduction in the requirements for number of materials to be irradiated, specimen types, or number of specimens per reactor is permitted, but the amount of testing may be reduced if the initial results agree with predictions. Integrated surveillance programs must be approved by the Director of Nuclear Reactor Regulation on a case-by-case basis. Criteria

for approval include the following considerations:

1. The design and operating features of the reactors in the set shall be sufficiently similar to permit accurate comparisons of the predicted amount of radiation damage as a function of total power output.
2. There shall be adequate arrangements for data sharing between plants.
3. There shall be a contingency plan to assure that the surveillance program for each reactor will not be jeopardized by operation at reduced power level or by an extended outage of another reactor from which data are expected.
4. There shall be substantial advantages to be gained in reduced power outages or personnel exposure to radiation, achieved by not requiring surveillance capsules in all reactors in the set.

### III. Report of Test Results

A. Each capsule withdrawal and the results of the fracture toughness tests shall be the subject of a summary technical report to be submitted for approval to the Director of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, within 90 days after completion of testing. The Director shall be notified at least 30 days in advance of the capsule withdrawal, giving the expected date of completion of testing and submittal of report.

B. The report shall include the data required by ASTM E 165, as required by paragraph II.B.1, and the results of all fracture toughness tests conducted on the bellline materials in the irradiated and unirradiated conditions.

C. If a change in the operating pressure-temperature limits given in the Technical Specifications is required, the revised limits shall be submitted with the report, including any changes made in operating procedures required to meet the limits.

➤ 45 FR 79820  
Published 12/2/80  
Comment period expires 1/16/81

### 10 CFR Parts 50, 51, and 100

#### Environmental Impact Statement for Reactor Siting Criteria

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Notice of Intent to Prepare an Environmental Impact Statement for Revision of the Regulations Governing the Siting of Nuclear Power Plants.

**SUMMARY:** On July 29, 1980, the Nuclear Regulatory Commission published for comment "Advance Notice of Rulemaking: Revision of Reactor Siting Criteria" (ANR) in the *Federal Register* (45 FR 50350). As part of this rulemaking, the NRC intends to prepare an Environmental Impact Statement (EIS). This notice of Intent requests comment on (1) the range of alternatives which should be evaluated for each of the items identified in the ANR as suitable to be addressed in the regulations, and (2) the issues which should be evaluated in the EIS.

**DATE:** Comment period expires January 16, 1981.

**Note.**—Comments received after the expiration date will be considered if it is practical to do so, but assurance of consideration cannot be given except as to comments filed on or before that date.

**ADDRESS:** Written comments should be submitted to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docket and Service Branch.

Single copies of the "Advance Notice of Rulemaking: Revision of Reactor Siting Criteria" and the "Report of the Siting Policy Task Force," NUREG-0625, may be obtained without charge by writing to the Director, Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

IAEA Safety Guide 50-SG-S4, "Site Selection and Evaluation for Nuclear Power Plants with Respect to Population Distribution," (International Atomic Energy Agency, Vienna, 1980) may be examined at the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C. or at local public document rooms in the vicinity of nuclear power plant sites or copies may be purchased from UNIPUB, 345 Park Avenue South, New York, NY 10010.

**FOR FURTHER INFORMATION CONTACT:**  
Contact Dr. William R. Ott, Office of

Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, (301) 443-5988.

**SUPPLEMENTARY INFORMATION:** This Notice of Intent is part of the scoping process for the EIS which the NRC is planning to prepare in connection with the proposed revision of its regulations governing the siting of nuclear power plants. The purpose of this scoping process is to define both the alternatives (for specifying criteria for identified topics) which will be examined in detail and the issues that will be addressed in comparing the alternatives in the environmental impact statement.

#### Scope of the Rulemaking and the Environmental Impact Statement

The items under consideration for rulemaking were identified in "Advance Notice of Rulemaking: Revision of Reactor Siting Criteria" (45 FR 50350) (ANR) and are listed in Table 1. This set of items together with the restrictions established in the ANR establishes the presently intended scope of the rulemaking. Additional items identified by commenters will be considered if the NRC staff judges that they are sufficiently important to the overall success of this rulemaking that they require immediate resolution. Specific alternatives for establishing criteria with respect to some of these items were listed in the ANR. In addition, for the purposes of the scoping process for the EIS, the NRC staff will consider alternatives for criteria that may be identified during the comment period on this Notice of Intent.

Although the NRC staff considered a wide range of information in arriving at the recommendations<sup>1</sup> which formed the main thrust of the ANR, additional technical studies will be required to fully document the impacts of the proposed criteria and reasonable alternatives to those criteria. The NRC staff has developed a tentative outline<sup>2</sup> for the EIS to aid in identifying areas in which additional studies will be needed. Appendix A presents this tentative outline with notations after appropriate sections indicating whether the ANR or the NRC FY 1980 Authorization Act is the primary basis for the section. Appendix B presents a more detailed discussion of the technical approach for assessing issues that the NRC staff believes may be important in making informed choices among the alternatives.

<sup>1</sup> "Report of the Siting Policy Task Force," NUREG-0625, August 1979.



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**Table 1.—Items Under Consideration for Rulemaking**

|                                                                                             |
|---------------------------------------------------------------------------------------------|
| Demographic criteria                                                                        |
| Fixed exclusion distance                                                                    |
| Fixed protective action distance                                                            |
| Population density                                                                          |
| Population distribution                                                                     |
| Minimum standoff distance from external hazards                                             |
| Airports                                                                                    |
| LNG and LPG terminals and pipelines                                                         |
| Large quantities of explosive or toxic materials                                            |
| Major dams                                                                                  |
| Navigable waterways which are transportation routes for hazardous materials                 |
| Other nuclear power plants                                                                  |
| Interdiction of contaminated groundwater                                                    |
| Consideration of post-licensing changes in off-site activities                              |
| Prohibition of sites requiring unique or unusual design to compensate for site inadequacies |
| Site approval at earliest decision point; criteria for reopening                            |
| NRC review termination upon State agency disapproval                                        |

Relative to the issues identified in the appendices, comments will be most useful which:

1. Suggest other realistic alternatives to those presented in Appendix A, Chapter III (e.g., a specific approach or combination of approaches for establishing demographic criteria together with a technical justification of the approach).<sup>2</sup> Indicate why any identified alternatives are not worthy of further consideration.
2. Address the relevancy of the issues identified in Appendix B and the staff's planned approach to analysis of these issues.
3. Identify and justify any other issues which should be considered in this rulemaking.

### Scoping Process for the EIS

The scoping process for the EIS will consist of publication of the ANR and

this Notice of Intent and consideration of the comments on each in preparation of the Scoping Summary Report. No public scoping meeting is planned; participation in the scoping process will be limited to written responses to this Notice of Intent. A special mailing of this Notice will be made to persons, organizations and agencies who have indicated an interest in this subject area. Federal agencies identified by the Council on Environmental Quality as having special expertise in this area will be included in this mailing. Other agencies which have jurisdiction by law or special expertise with respect to any environmental impact involved, or which are authorized to develop and enforce relevant standards are invited to participate in this scoping effort. Affected State and local agencies or any affected Indian tribes that wish to participate by commenting are invited to do so. At the conclusion of the comment period for this Notice of Intent, the NRC staff will assess the comments on both this Notice and the ANR; and will define the alternative criteria which will be considered in detail in the EIS. Since there will likely be considerable overlap and redundancy amongst various suggested alternative criteria, the staff will utilize its judgment and experience to establish a reasonable number of alternatives (which may differ from those tentatively listed in Appendix A) that have significant differences but have a good chance of equitably establishing appropriate siting restrictions for future nuclear power plants. The issues to be examined for each of the criteria will also be defined (see Appendix B).

The scoping process will be completed by the preparation and publication of a Scoping Summary Report. This report will include a final statement of the items that will be covered in this rulemaking, the reasons for deleting any of the items included in the ANR and a revised and more detailed outline for the EIS. A brief description of the reasons for including alternative criteria not presently identified, eliminating alternatives presently under consideration or combining similar alternatives will be presented. The report will also identify any issues with respect to these alternatives which have been included for detailed examination or have been dismissed from further consideration as peripheral, insignificant or adequately covered elsewhere. The report will also provide information on (1) the schedule for completion of the rulemaking, (2) related environmental studies, and (3) arrangements for others to prepare background information for the EIS. Copies of this report will be distributed

to those who participated in the scoping process by commenting on the ANR or Notice of Intent.

### Appendix A—Tentative Table of Contents for Siting EIS

#### I. Summary

- I.1 Introduction.
- I.2 Description of Proposed Action.
- I.3 Description of Alternatives.
- I.4 Summary of Major Issues (Including Unresolved Issues).
- I.5 Identification of Preferred Alternatives.

#### II. Purpose and Need for the Action

- II.1 Purpose of Promulgation of Reactor Siting Criteria.
- II.2 Need for Reactor Siting Criteria; discussion of No Action Alternatives.

#### III. Identification of Alternatives

- III.1 Introduction.
  - III.1.a. Discussion of AND and EIS Scoping Process as determinants of Scope of Rulemaking and Analyses of Alternatives.
  - III.1.b. Long Term Goals for Revision of Siting Criteria: Rationale for Selection of Criteria (ANR, Item A)
    - III.1.b1 Separation of siting from design (LWR specific?).
    - III.1.b2 Desired degree of remoteness; regionalization.
    - III.1.b3 Consideration of accidents beyond the design basis.
    - III.1.b4 Attainable risk for nuclear compared to risks from other power generation sources (Individual vs. Societal Risk).
- III.2 Demographic Criteria (ANR, Item B; NRC FY 80 Authorization Act).
  - III.2.a. Exclusion distance (ANR, Item B).
  - III.2.b. Specification of population density limit (ANR, Item B).
    - III.2.b.1 Siting Policy Task Force recommendation (ANR, Item B, Alternative A).
    - III.2.b.2 Three tier approach (ANR, Item B, Alternative B).
    - III.2.b.3 Single limit (ANR, Item B, Question 2).
    - III.2.b.4 Incorporation of meteorological and topographical constraints (ANR, Item B, ACRS comments).
  - III.2.c. Specification of population distribution limit (ANR, Item B).
    - III.2.c.1 Siting Policy Task Force recommendation (ANR, Item B, Alternative A).
    - III.2.c.2 Three tier approach (ANR, Item B, Alternative B).
    - III.2.c.3 Single value, uniform limit (ANR, Item B, Question 2).
    - III.2.c.4 Incorporation of meteorological and topographical constraints (ANR, Item B, ACRS comments).
- III.3 Restrictions on Proximity to External Hazards (ANR, Item C).
  - III.3a. Practicality of proximity limitation (i.e. standoff distance) for each type of hazard (ANR, Item C, Alternative A).
  - III.3.b. Feasibility of design performance requirements (ANR, Item C, ACRS comments with regard to other nuclear plants).
  - III.3.c. Three tier approach (ANR, Item C, Alternative B).

<sup>2</sup>To help the public provide informed comment on the range of alternatives for setting demographic criteria which may be appropriate for consideration in the EIS, copies of IAEA Safety Guide 50-SG-S4 "Site Selection and Evaluation for Nuclear Power Plants with Respect to Population Distribution" are available for examination at the Commission's Public Document Room at 1717 H Street NW., and at all local Public Document Rooms. This guide presents a survey of procedures used by regulatory authorities in IAEA member nations for considering population in reactor reviews. There is no special significance given to any of these approaches by the NRC staff but this summary does present most of the alternatives which may be reasonable to consider in establishing demographic criteria.



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III.3.d. Defer generic resolution; continue case-by-case determinations.

III.4. Capability to Interdict Contaminated Groundwater (ANR, Item D).

III.4.a. Unacceptable site characteristics plus performance requirements.

III.4.b. Performance requirements.

III.4.c. Case-by-case review for compliance with performance requirements.

III.5. Post-Licensing Changes in Offsite Activities (ANR, Item E).

III.5.a. Passive controls (ANR, Items F1, F2).

III.5.a.1. Private sector; notification requirements.

III.5.a.2. Local authorities; information requirements.

III.5.a.3. Other Federal agencies; notification requirements.

III.5.b. Generic responses restricting plant operation; criteria for action (ANR, Item F4, Questions 2 and 3).

III.5.c. Legislation to acquire direct control (ANR, Item F, Question 1).

III.6. No site characteristics requiring unique or unproven compensating design features. (Alternative is case-by-case design review.) (ANR, Item G).

III.7. Site approval at earliest decision point. (Alternative is no action.) (ANR, Item H).

III.8. Termination of Review Upon Disapproval by State Agency Whose Approval is Necessary (ANR, Item I).

III.8.a. Letter from governor (ANR, Item I, Question 2).

III.8.b. State designated overall approval authority (ANR, Item I, Question 2).

III.8.c. Any State Agency (ANR, Item I, Question 2).

III.8.d. No Response to State Agency Disapprovals (ANR, Item I, Question 2).

IV. *Issues Important to the Specification of Reactor Siting Criteria*

IV.1. Radiological Source Terms (Releases) and the Consequences of a Full Range of Accidents (ANR, Item B; NRC FY 80 Authorization Act).

IV.2. Feasibility of Protective Actions (ANR, Item B, ACRS comments; NRC FY 80 Authorization Act).

IV.2.a. Population effects.

IV.2.b. Transportation constraints.

IV.2.c. External hazard initiators.

IV.3. Site Availability (NRC FY 80 Authorization Act).

IV.3.a. Population density and distribution criteria effects (Meteorology, topography, and regionalization) (ANR, Item B).

IV.3.b. Effects of Physiographic constraints (NRC FY 80 Authorization Act).

IV.3.c. Land use/external hazards considerations (ANR, Item C).

IV.3.d. Impacts of criteria with respect to alternative fuels (ANR, Item A).

IV.3.e. Groundwater interdiction requirements effects (ANR, Item D).

IV.3.f. Use of Existing sites or Federal lands (ANR, Item F).

IV.3.g. Effect of prohibition on sites requiring unusual or unproven design to compensate for site deficiencies (ANR, Item G).

IV.4. Socioeconomic Impacts.

IV.5. Severity of External Hazards (ANR, Item C).

IV.6. Effects of Post-Licensing Land Use Control (ANR, Item 5).

IV.7. Implications of Site Approval at Earliest Decision Point (ANR, Item H).

IV.8. Implications of Deferral to State Agency Disapprovals (ANR, Item I).

V. *Comparison of Alternatives; Selection of Proposed Criteria*

V.1. Introduction; Discussion of Comparative Analyses Consistent with Siting Goals.

V.1.a. Separation of siting from design.

V.1.b. Degree of remoteness; regionalization.

V.1.c. Accidents beyond the design basis.

V.1.d. Attainable risk with respect to other power generation sources.

V.2. Demographic Criteria.

V.2.a. Exclusion distance.

V.2.b. Population density limits.

V.2.c. Population distribution limits.

V.3. Proximity Restrictions for External Hazards.

V.4. Groundwater Interdictive Capability.

V.5. Post-Licensing Changes in Offsite Activities.

V.6. Unique or Unusual Design Prohibition.

V.7. Early Site Approval.

V.8. Deferral to State Agency Disapproval.

### VI. List of Preparers

### VII. Appendices

#### Appendix B.—Technical Approach to Detailed Analyses

I. *Issue: Radiological consequences of accidents.*

*Proposed Analytical Approach:* (EIS Section IV.1.)

Proposed criteria will be compared with realistic alternatives on the basis of impacts on public health and safety. For demographic criteria this means that variation in doses to the maximally exposed individual and the population from a full range of accident releases must be examined for alternative ways of specifying constraints on population density and distribution. The consequences will be evaluated with an updated version of the Reactor Safety Study Consequences Model (CRAC) computer code. Existing sites and a hypothetical site will be evaluated. Consequences considered will include early fatalities, injuries, latent fatalities, and property damage. Both individual and societal risk will be evaluated but may differ in relative importance for establishing different criteria. (Comment on the role of societal versus individual risk as determinants of exclusion distance and population density and distribution limits would be useful.)

II. *Issue: Feasibility of Protective Actions.*

*Proposed Analytical Approach:* (EIS Section IV.2.)

The topics under consideration for rulemaking with respect to demographic criteria and external hazards will be

examined to determine whether the capability to take protective action in the vicinity of a site under accident conditions might be impaired or enhanced by various choices of alternative criteria.

III. *Issue: Definition of region.*

*Proposed analytical Approach:* (EIS Section IV.3.a.)

Alternative schemes of regionalization will be examined to determine a proper basis for establishing regional criteria. Socioeconomic and physiographic units will be examined to establish potential regional breakdowns. Effects of uniformity of population distribution, water resource restrictions and any other appropriate regional concerns will be considered when deciding on the proper regionalization scheme. (Comment would be useful with regard to appropriate determinants of region.)

IV. *Issue: Site availability.*

*Proposed Analytical Approach:* (EIS Sections IV.3.a and IV.3.b.)

Consistent with the intent of the NRC FY80 Authorization Act, the new demographic criteria should not preclude further siting of nuclear power plants in any region of the United States. An assessment will be made for each region that identifies the variation in availability of sites for nuclear power plants as a function of the structure of the criteria and the variation in numerical values as well as realistic constraints on siting such as water availability and violation of safety criteria. The benefits of regionally based criteria versus nationwide criteria will be examined. Basic information will be developed from existing siting studies which, taken together, cover large portions of the country.

(V) *Issue: Socioeconomic Impacts.*

*Proposed Analytical Approach:* (EIS Section IV.4.)

The socioeconomic impacts of varying degrees of remoteness will be investigated. Economic impacts of increased transmission distances, impacts on land use and other factors will be addressed along with sociological penalties and inequities in distribution of cost and benefits of such siting.

VI. *Issue: Severity of External Hazards.*

*Proposed Analytical Approach:* (EIS Sections IV.3.c and IV.5.)

A literature review will be performed to establish the potential level of hazard associated with the external hazards listed in the ANR and any other appropriate topics. Staff practice for dealing with these hazards will be assessed. Available models for characterizing the effect of a hazardous external event will be evaluated. The

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feasibility of establishing a meaningful protective distance will be examined. The availability of sites associated with the demographic criteria proposed by the staff will be reexamined to determine whether the standoff criteria will significantly alter site availability.

**VII. Issue: Engineering Alternatives to Standoff Distances.**

*Proposed Analytical Approach:* (EIS Sections III.3 and IV.5.)

The feasibility of design performance requirements as opposed to specific standoff distances will be evaluated.

**VIII. Issue: Precluding Siting of Nuclear Reactors in any Region of the United States.**

*Proposed Analytical Approach:* (EIS Section IV.3.d.)

Energy generation from any source has its associated risk and risks from some energy sources may be greater than that of the nuclear option. Therefore, it has been suggested that the siting criteria should not be so stringent as to preclude the use of nuclear power from any region of the United States. The implications of not precluding nuclear power from any region of the United States will be examined.

**IX. Issue: Effect of Groundwater Interdiction Criteria on Site Availability.**

*Proposed Analytical Approach:* (EIS Section IV.3.e.)

The effect on site availability of alternative siting criteria that assure the capability for groundwater interdiction would be examined.

**X. Issue: Post-Licensing Land Use Control.**

*Proposed Analytical Approach:* (EIS Section IV.8.)

The feasibility of passive and active controls on post-licensing land use in the vicinity of a nuclear plant would be explored. Alternative controls on population risk (given that criteria are exceeded) such as changes in operating procedures or authorized power level or additional risk reducing engineering systems would be addressed.

**XI. Issue: Use of Existing Sites.**

*Proposed Analytical Approach:* (EIS Section IV.3.f.)

The existing sites would be examined for various levels of criteria to determine which sites were acceptable under each proposal. The feasibility of adding additional units to each of these sites would then be examined and an estimate made by region of remaining siting capacity. Using the characteristics of the selected site, an estimate would be prepared of the availability of multi-unit sites as a modification of the availability information for the various demographic criteria and standoff distances.

**XII. Issue: Use of Federal Lands.**

*Proposed Analytical Approach:* (EIS Section IV.3.f.)

Federal land would be surveyed to establish suitability for location of single unit plants up through many-unit energy centers. The historical availability of Federal land would be explored for uses such as public power supply systems (Bonneville Power Authority, Tennessee Valley Authority, etc.), oil shale lease program, forestry timber management, water supply projects. The possible benefits would be examined regionally from well planned use of Federal lands to supplement areas already available to utilities and implement a multi-unit existing site approach. The degree of improvement in criteria that is possible if the availability associated with the recommended criteria is held constant after Federal lands are added would be assessed.

**XIII. Issue: Use of Unusual or Unproven Engineering Design to Compensate for Site Deficiencies.**

*Proposed Analytical Approach:* (EIS Section IV.3.g.)

An estimate would be made of the effect on site availability of instituting such a requirement, particularly where large areas might have a common deficiency which might preclude siting from a large region.

**XIV. Issue: Termination of Review After State Disapproval.**

*Proposed Analytical Approach:* (EIS Section IV.8.)

The implications of establishing automatic review termination with respect to various levels of State disapproval will be examined.

45 FR 81602

Published 12/11/80

Comments must be received by 2/9/81. Comments received after 2/1/81, will be considered if it is practical to do so, but assurance of consideration cannot be given except as to comments filed on or before 2/1/81.

### 10 CFR Part 50

#### Domestic Licensing of Production and Utilization Facilities; Design and Other Changes in Nuclear Power Plant Facilities After Issuance of Construction Permit

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Advance notice of proposed rulemaking.

**SUMMARY:** The U.S. Nuclear Regulatory Commission is considering amending its regulations to define more clearly the

limitations on a construction permit holder to make changes in a facility during construction. This advance notice of proposed rulemaking is being published to invite comments, suggestions, or recommendations on the content of the proposed amendment. There will also be opportunity later for additional public comment on the proposed rule, if any, that may be developed by the Commission.

**DATES:** Comments must be received by February 9, 1981. Comments received after February 1, 1981, will be considered if it is practical to do so, but assurance of consideration cannot be given except as to comments filed on or before February 1, 1981.

**ADDRESSES:** Written comments, suggestions, or recommendations should be sent to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Attention: Docketing and Services Branch. Copies of comments received may be examined at the NRC Public Document Room at 1717 H Street, N.W., Washington, D.C.

#### FOR FURTHER INFORMATION CONTACT:

Warren Minners, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Phone: 301/492-7581.

#### SUPPLEMENTARY INFORMATION:

##### Background

The Atomic Energy Act of 1954, as amended, and the regulations of the Nuclear Regulatory Commission (NRC) provide a framework for issuance of construction permits (CPs) for nuclear power plants, but do not define precisely the commitment to which a permittee is legally bound when the NRC grants it a CP. As a result, there are conflicting opinions concerning the requirements associated with a CP, particularly with regard to whether a permittee is bound by representations made in its application, including the Preliminary Safety Analysis Report (PSAR), and on the hearing record. Because of this, for many years the NRC staff has been faced with the problem of not having clear guidelines for regulating changes in facility design, or in the permittee's procedures and staffing, between the time a CP is issued and a Final Safety Analysis Report (FSAR) is filed by the permittee as part of its Operating License (OL) application. Therefore, the staff's actions and practices (as well as those of holders of CPs) in this matter have developed on a case-by-case basis over the years.

The problem arises because the applicant is not required to supply initially all of the technical information required to complete the application and

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support the issuance of a CP which approves all proposed design features, so long as the Commission is able to make the requisite findings under Section 50.35(a) of 10 CFR Part 50.

As noted in a 1970 rule change with respect to Section 50.35 (35 FR 5317, "Backfitting of Production and Utilization Facilities; Construction Permits and Operating Licenses," March 31, 1970), one reason for not having defined precisely an applicant's CP commitments was an awareness that "the rapidly expanding technology in the field of atomic energy means that new or improved features or designs that may enhance the safety of production and utilization facilities are continually being developed." This echoed the Supreme Court's decision in *Power Reactor Development Co. v. Electrical Union*, 362 U.S. 396 (1961). Thus, the judgment was made that a permittee should only be bound by the "principal architectural and engineering criteria."

The present system provides no guidance regarding notification of design changes made after issuance of a CP or the type of staff response to be made. CP holders have informed NRC of design changes from the PSAR in various ways: transmittal of letters and PSAR amendments, submittal of informal drafts and oral communications, and delay of notification until submittal of the FSAR. The NRC staff's responses to notifications of such changes have most commonly been to defer detailed review until the OL application is reviewed. However, where the staff has considered a proposed design change significant and judged that the matter must be resolved before construction proceeds too far, it has undertaken detailed reviews. In some cases, safety evaluations or letters to CP holders have been written stating the staff's views about the proposed change.

The existing process has led to three major problems. First, there is no clear basis upon which the Office of Nuclear Reactor Regulation (NRR) can assess definitely whether changes in facility design, permittee procedures, or staffing after issuance of a CP require a formal CP amendment; second, there is no clear basis on which the Office of Inspection and Enforcement (IE) can enforce requirements in a CP; and third, the present process, since it provides no ground rules about the changes CP holders may make, on occasion prompts litigants (other than applicants) in CP hearings to litigate many details of the application in order to bind applicants.

An attempt to resolve some of these problems was made by the Atomic

Energy Commission in a rule proposed in 1969 (34 FR 8540, April 16, 1969) that would have added, among other things, a new section defining the "principal architectural and engineering criteria," departure from which would have required a CP amendment.

Most commenters on the proposed rule criticized the definition for being so broad and so all-inclusive as to lead to the conclusion that the proposed rule would make it mandatory that the design of the facility, as well as the quality assurance program, should be essentially complete and not subject to change at the CP stage, unless an applicant were willing to continually propose changes and amendments to its CP (thereby undergoing frequent and time-consuming scrutiny by the NRC staff).

In promulgating the final rule (35 FR 5317, March 31, 1970), the Atomic Energy Commission deleted the proposed definition saying that "it required further study."

Since 1970, two staff studies were made in order to specify clearly what a holder of a CP could and could not change to provide a regulation that would be enforceable and to institute a new mode of doing business that would not cause a proliferation of CP amendments for minor changes. The results of the first study were reported in December 1975 and the results of the second in March 1977.<sup>1</sup> In both studies the staff tried to provide definitive guidance as to changes that would require a CP amendment by attempting to define the "principal architectural and engineering criteria" and establishing guidelines to determine when a proposed change would not fall within these criteria.

The first study proposed to make the "Design Features" section of the Technical Specifications a binding part of the CP, in the same way that the entire Technical Specifications are made part of an OL. In specifying the "Design Features," principal reliance would be placed on use of the Standard Review Plan, the General Design Criteria, Regulatory Guides, Branch Technical Positions, and industry criteria, codes, and standards to the extent necessary.

In the second study, the staff proposed that the term "principal architectural and engineering criteria" reference the General Design Criteria of Appendix A to 10 CFR Part 50 and have the same meaning as the term "principal

design criteria" as used in § 50.34(a)(3)(i). The study proposed that the acceptance criteria provided in each of the Standard Review Plan sections constituted, in fact, the principal design criteria and should be used to develop a document consisting of a list of the "principal architectural and engineering criteria." The study also proposed fifteen other changes that would require a CP amendment. Of these, twelve items related to changes in the major features or components of a facility. Proposed guidance was provided to assist in determining when a proposed change would require a CP amendment.

Although both reports were subject to some peer review, no formal action was taken because of time pressures, difficulties of definition similar to those of the rule proposed in 1969, and the feeling that the present system was workable.

### Commission Intentions

It is clear from a review of the present procedures, the 1969 rulemaking, and the two studies cited, that a rule should be considered that would improve the present licensing process and develop specific descriptions of the essential features of a facility (including the quality assurance program and other procedures and staffing requirements) to which the CP holder would be bound (whether under the rule, license conditions, or through a Licensing Board decision). The key problem, then, is to clarify and specify to what information the CP holder should be bound, at what point in the licensing process, under what circumstances, and through what means. There is also a need to control the way in which a CP holder implements NRC criteria.

The rulemaking proceeding will address the objectives of such a regulation, the alternative means of accomplishing the objective, and the advantages and disadvantages of each alternative. The areas to be addressed would include: (1) alternative descriptions of the essential features of the design, procedures, and staffing of a facility to which a CP holder would be bound, (2) specification of which changes would require no action, which would require notification, and which would require prior approval, and (3) the form of requirement, whether through rule, license condition, Licensing Board decision, or CP amendment.

The following five alternatives have been suggested:<sup>2</sup>

1. Maintain the status quo.

<sup>1</sup> These studies are described in Staff Paper SECY-80-90 (February 14, 1980) which is available for inspection in the Commission's Public Document Room.

<sup>2</sup> These alternatives are described more thoroughly in SECY-80-90 (February 14, 1980), which is available for inspection in the Commission's Public Document Room.

## PART 50 • PROPOSED RULE MAKING

2. Drawing on § 50.55(e) of 10 CFR Part 50 (dealing with notifications of significant deficiencies having safety significance) and § 50.59 (dealing with changes to previously approved designs having safety significance), adopt a rule that establishes general criteria for determining circumstances requiring notification and CP amendment.

3. Adopt a rule defining "principal architectural and engineering criteria" (in effect reviving the 1989 rulemaking on this subject), using information learned to date.

4. Adopt a rule that all details of the application, including the PSAR, be made conditions of the CP and may not be changed without prior Commission approval.

5. Restructure the licensing process to require that sufficient plant design details and equipment performance specifications be provided in the PSAR so that the safety analysis can be essentially a final one. Upon review and approval, the important safety-related elements of the design would be made conditions of the CP and could not be changed without prior Commissioner approval. Staff review at the OL stage would then be primarily a matter of confirming that the "as built" plant conformed to the CP-stage safety analysis.

The Commission tentatively prefers implementation of Alternative 3 with a shift to Alternative 5 on June 1, 1983. Rules based on the concepts of alternatives 2, 3, or 4 could be imposed immediately. Alternatives 2 and 3 could provide some specified interval to allow the holders of construction permits to develop a list and description of the features or other changes subject to the rule. Alternatives 4 and 5 could be applied practicably only to new CPs.

Comments, suggestions, or recommendations on a proposed rule that would clarify the bounds on a construction permit holder during the course of construction are invited from all interested persons. Comments which discuss advantages or disadvantages, including cost or implementation schedules and the extent to which any such rule should be applied to existing construction permit holders, are particularly sought.





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b. Except as noted in 2.c.(1), a site must meet the following criteria to be accepted as a candidate site without further review of the site selection process. (Technically appropriate and economically reasonable cooling system mitigative measures may be assumed for each candidate site.)

(1) Consumptive use of water would not cause significant adverse effects on other water users.

(2) There would not likely be any further endangerment of a State or Federally listed threatened or endangered plant or animal species.

(3) There would not likely be any significant impacts to spawning grounds or nursery areas of significance in the maintenance of populations of important aquatic species.

(4) Discharges of effluents into waterways would likely be in accordance with State or Federal regulations (e.g., avoidance of discharges to waters of the highest State quality designation) and would not likely adversely affect efforts of State or Federal agencies to implement water quality objectives (e.g., additional discharges to waters of currently unacceptable quality as determined by a State).

(5) There would be no preemption or likely adverse impacts on land uses specially designated for environmental or recreational purposes such as parks, wildlife preserves, State and National forests, wilderness areas, flood plains, Wild and Scenic rivers, or areas on the National Register of Historic Places.

(6) There would not likely be any significant impact on terrestrial and aquatic ecosystems, including wetlands, which are unique to the resource area.

(7) The population density, including weighted transient population, projected at the time of initial operation of a nuclear power plant, would not exceed 500 persons per square mile averaged over any radial distance out to 30 miles from the site (cumulative population at a distance divided by the area at that distance), and the projected population density over the lifetime of the nuclear power plant would not exceed 1,000 persons per square mile (similarly weighted and measured).<sup>3</sup>

(8) The site is not in an area where additional safety considerations (geology; seismology; hydrology; meteorology; and industrial, military, and transportation facilities) or environmental considerations for one site compared to other reasonable sites within the region of interest would result in the reasonable likelihood of having to expend substantial additional sums of money (cumulative expenditures in excess of about 5% of total project capital costs) to make the project licensable from a safety standpoint or to mitigate unduly adverse environmental impacts.

c. (1) If a site does not meet one or more of the threshold criteria provided in VI.2.b., the site may be acceptable as a candidate if it can be reasonably shown that further examination of that particular type of water source and physiographic unit would not

likely identify a site that would meet those same threshold criteria.

(2) If any candidate site does not meet one or more of the threshold criteria provided in VI.2.b. to such an extent that serious adverse environmental impacts would result from its use, that site should be rejected as a candidate site.

3. If the approach of VI.1.a. above is relied upon, demonstration must be made that the site selection process incorporated the following criteria:

a. The overall objectives of the siting study and all initial constraints and limitations (including the geographic area, i.e., region of interest, which is the subject of the study) shall be explicitly stated giving the basis and rationale for all choices.

b. The proposed ways of meeting the stated objectives shall be described, including the general approach to the site selection process.

c. The study shall explicitly state factors (e.g., aquatic biology) under consideration, parameters (e.g., spawning grounds and nursery areas) by which these factors were measured, and criteria (e.g., no significant impact) that define levels of achievement.

d. The site selection study shall be interdisciplinary and shall include natural, social, and environmental sciences. The range of the responsibilities of the study team shall be clearly defined and the methods employed in resolving differences within the group or of arriving at the consensus shall be explicitly stated.

e. The process that led to the identification of candidate sites including all specific methodologies shall be explicitly stated in detail.

(1) Where preemptive screening is used, all limiting or exclusionary criteria employed shall be explicitly stated, the bases for each criterion given, and the ways in which they are applied explained.

(2) Where comparative analysis is used, all methodologies used involving importance factors, preference functions, utility functions, weighting factors, ranking scales, scoring schemes, and rating systems shall be explicitly described: the basis for the selection of each methodology given; and the ways in which each is applied explained.

f. The study shall contain detailed description of administrative means used to support the site selection study, including any quality assurance program commensurate with the objectives of the study and a data management system for handling technical files, maps, and other information.

g. Definitions of terms used in the study shall be included.

4. Any intervening party and the NRC staff may propose one or more additional sites for consideration as candidate sites provided that the following conditions are met:

a. The additional sites are proposed for review within 30 days after the first special prehearing conference (i.e., the conference held pursuant to § 2.731a of 10 CFR Part 2.).

b. The proposal contains a reasonable showing that the additional sites are comparable to the applicant's slate of candidate sites in their ability to meet the criteria specified in VI.2.b. and VI.2.c. and would add to the diversity which is exhibited

by the applicant's slate of candidate sites; or where the applicant's candidate sites do not meet all the criteria specified in VI.2.b. and VI.2.c., the proposal contains a reasonable showing that the additional sites will meet these criteria.

c. Where a party identifies more than one additional site, each additional site must meet one of the tests specified in VI.4.b. above.

d. The additional sites have no physical features that would likely create substantial increases in the cost of constructing and operating nuclear power plants at the additional sites compared with the applicant's proposed site, unless there is a reasonable showing that the additional sites meet a criterion specified in VI.2.b. that is not met by the applicant's proposed site.

e. Multiple parties to NRC proceedings should consult with one another prior to proposing additional sites for consideration as candidate sites in order to reasonably limit the total number submitted.

5. A Presiding Atomic Safety and Licensing Board (ASLB) may on its own initiative proposed one or more additional sites for consideration as candidate sites up to 30 days after the issuance of the Draft Environmental Statement (DES). On or after the issuance of the DES, additional sites may be introduced by the ASLB, only after a balancing of the cost of delaying the proceeding against the likelihood that utilization of the additional site would avoid significant environmental harm.

6. The 30-day time limits in VI.4.a. and VI.5. above shall not be extended except upon a substantial showing of good cause.

### VII. Comparison of Proposed Site With Alternative Sites

1. After it is determined by either of the above approaches that the proposed site comes from a slate of candidate sites that are among the best that could reasonably be found, the NRC will not reject the proposed site solely based on its review of the alternative sites unless a comparison with the remaining candidate sites results in a determination that an obviously superior alternative exists. The NRC will determine obvious superiority among the candidate sites by a sequential two-part analytical test. The first part gives primary consideration to hydrology, water quality, aquatic biological resources, terrestrial resources, water and land use, socioeconomic, and population<sup>4</sup> to determine whether any alternative sites are environmentally preferred to the proposed site. The second part overlays consideration of project economics, technology, and institutional factors to determine whether, if such an environmentally preferred site exists, such a site is, in fact, an obviously superior site.<sup>5</sup> The following factors are considered in this second part of the test:

<sup>4</sup>This requirement will be modified as appropriate to conform to revisions to 10 CFR Part 100.

<sup>5</sup>In applying both parts of the test, the NRC will give consideration to the inherent uncertainties of cost-benefit analysis techniques and, where applicable, to the disparity in the data base between the proposed and alternative sites.

<sup>3</sup>This requirement will be modified as appropriate to conform to revisions to 10 CFR Part 100.

## PART 51 • PROPOSED RULE MAKING

a. The environmental and safety<sup>6</sup> considerations in terms of technology and costs of construction and operation of nuclear power plants at the sites.

b. The forward costs<sup>7</sup> at the proposed site compared to the alternative sites.

c. Other considerations, such as possible institutional barriers. The applicant's proposed site will be rejected solely based on NRC review of alternative sites only when the NRC determines that, considering both parts of the test, there is an environmentally preferable alternative which also is obviously superior, i.e., the NRC is confident that the applicant's proposed site should be rejected.

2.a. If an obviously superior alternative site is identified and the proposed site is rejected by the NRC, and if the applicant submits a new application naming the identified obviously superior site as the newly proposed site, the NRC will not require review of the alternative site question for the newly proposed site, provided that the previous slate of candidate sites had been determined to be acceptable by the criteria established in this rule.

b. If more than one obviously superior alternative site is identified and the proposed site is rejected by the NRC, the applicant may request that a further finding be made in that proceeding to determine whether one of those sites is obviously superior to the others. If that finding is made and one of those sites is obviously superior to the others and the applicant submits the obviously superior site as the new proposed site, the NRC will not require review of the alternative sites question for the newly proposed site, provided that the previous slate of candidate sites had been determined to be acceptable by the criteria established in this rule. If that finding is made and none of those sites is obviously superior to the others, the applicant may propose any of the obviously superior alternative sites for review as permitted according to 2.a. above.

c. If one or more obviously superior sites are identified and the proposed site is rejected by the NRC, the applicant may submit a new proposed site that is

comparable to the obviously superior sites in its ability to meet the criteria specified in Section VI.2.b. Where a new site is proposed, appropriate public notice of intent is provided, and a showing of comparability in meeting the criteria is made, the NRC will only require that the sequential two-part analytical test for obvious superiority be performed on the new proposed site and on the sites found obviously superior in the earlier proceeding.

### VIII. Reopening of the Alternative Site Decision

1. A reopening and reconsideration of the alternative site decision after a final limited work authorization or construction permit decision will be permitted only upon a reasonable showing that there exists significant new information that could substantially affect the earlier decision. Any decision to reconsider the alternative site decision or not in these instances will take into account preliminary estimates of the reasonable costs of delay and of moving to another site compared with the adverse environmental impacts that might be avoided by moving to another site.

2. For cases where the portion of the construction permit containing facility design is filed three years or more after the effective date of this rule and where an applicant submits the proposed and alternative sites for NRC evaluation as part of a full construction permit review at least 2½ years prior to filing the portion of the construction permit application containing detailed plant design, any reconsideration of the alternative site decision will be permitted only upon a reasonable showing that there exists significant new information that could substantially affect the earlier decision, as described in VIII.1. above. If the proposed and alternative sites were not submitted for NRC evaluation as part of a full construction permit review at least 2½ years prior to filing the portion of the construction permit application containing the plant design, costs of delay and of moving to another site will not be considered in any decision to reconsider the alternative site decision or not or in any resulting decision that there is or is not an obviously superior site.

3. If two sites are reasonably within a region of interest for a nuclear power plant site and both sites have received an affirmative NRC partial decision on an early review of alternative sites, an applicant may choose either site for an application to construct a specific nuclear power plant without reviewing the alternative site question, except on the basis of new information as provided in VIII.2. above.

45 FR 50350

Published 7/29/80

Comment period expires 9/29/80

*Modification of the Policy and  
Regulatory Practice Governing  
the Siting of Nuclear Power Reactors*

See Part 50 Proposed Rule Making

➤ 45 FR 79820

Published 12/2/80

Comment period expires 1/16/81

*Environmental Impact Statement for  
Reactor Siting Criteria*

See Part 50 Proposed Rule Making

<sup>6</sup>There are some site safety issues for which a cost-effective means for successful mitigation is not state-of-the-art engineering. For the purposes of alternative site analysis, these site safety issues are considered in terms of site acceptability, i.e., where successful mitigation is considered outside the state of the art, the site would be considered unacceptable. However, where the mitigation of the safety issues are considered to be within the state of the art, the site would be considered acceptable but still must undergo the comparative test, which includes the impact of the mitigation on overall project cost, to determine whether there is an obviously superior alternative. Even though the proposed site successfully passes the early evaluation of alternative sites, it could still be found unacceptable in the later detailed safety review of that site.

<sup>7</sup>For cases where the portion of the construction permit application containing facility design is filed 3 years or more after the effective date of this rule, and an early site review application for the review of alternative sites had not been filed at least 2½ years earlier, the costs of moving to another site, including costs of delay, will be given no weight in any consideration of alternative sites or in any decision whether to reopen a previous decision on this subject.

## PART 71 • PROPOSED RULE MAKING

➤ 45 FR 81058  
Published 12/9/80  
Comment period expires 2/27/81

### 10 CFR Part 71

#### Advance Notification to States of Transportation of Certain Types of Nuclear Waste

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The Commission is considering amending its regulations to implement a federal statute which requires the NRC to provide for timely notification to the governor of any state prior to transport of nuclear waste, including spent fuel, to, through, or across the boundary of a state when the Commission determines the shipment is potentially hazardous to health and safety. As proposed, the amendments to 10 CFR Part 71 would require a licensee shipping nuclear waste in a specific type of package and in certain quantities, in both intrastate and interstate transport, to provide advance notification of shipment to the governors of states affected. This notification will provide governors advance information, not otherwise available to them, related to nuclear waste transportation in their states. Shipment of spent fuel is covered under a separate amendment to the Commission's regulation 10 CFR Part 73 since information regarding these shipments contains sensitive safeguards data which must be protected.

**DATE:** Comment period expires March 9, 1981.

**ADDRESSES:** Written comments should be submitted to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Attention: Docketing and Service Branch. Copies of comments on the proposed rule may be examined in the Commission's Public Document Room at 1717 H Street, NW., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** John P. Roberts, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555 (Telephone 301-427-4205).

#### SUPPLEMENTARY INFORMATION

##### Background

Section 302(a) of Public Law 96-296 states:

The Nuclear Regulatory Commission, within 90 days of enactment of this Act, shall promulgate regulations providing for timely notification to the Governor of any State prior to the transport of nuclear waste, including spent nuclear fuel, to, through, or across the boundaries of such State. Such notification requirement shall not apply to

nuclear waste in such quantities and of such types as the Commission specifically determines do not pose a potentially significant hazard to the health and safety of the public.

#### Discussion of Proposed Rule

The Commission has examined the question of potential significant hazard to the health and safety of the public with respect to the transport of nuclear waste. The Commission and the Department of Transportation have established packaging standards for various quantities of radioactive material to provide for adequate safety of the public. There are two basic categories of packages, Type A and Type B. Type A packages must be designed to withstand the rigors of normal transport but are not designed to withstand transport accidents. Therefore, the quantities and types of radioactive material which may be transported in Type A packages are limited so that, if released in an accident, no significant hazard to public health and safety would result. Type B packages, on the other hand, must be designed to withstand both the normal conditions of transport and specified accident conditions. There are no quantity limits for radioactive material per se in Type B containers. Factors such as weight, volume, decay heat generation, and criticality control serve to place practical restrictions on the contents of Type B containers in demonstrating that the design meets regulatory requirements. Considering the types and quantities of materials shipped in Type A and Type B packages, it seems reasonable to conclude that quantities of radioactive waste required to be shipped in a Type A package do not pose a potentially significant hazard to the public health and safety. This is why the Type B packaging standards are more stringent than Type A standards. Although NUREG-0170, the Final Environmental Statement on the Transportation of Radioactive Material by Air and Other Modes (available from the Nuclear Regulatory Commission, Division of Technical Information and Document Control, Attention: Sales Manager, Washington, DC 20555) indicates that the potential risk is small, the Commission has determined that, in accordance with the intent of the Congress, the requirement for advance notification should be extended to those types and quantities of nuclear waste requiring specific packaging structural standards to withstand the effects of accidents, that is, Type B or large quantities of nuclear waste.

In NUREG-0170, it was estimated that about 389,000 packages of waste will be shipped in 1986. Most waste shipments will involve limited quantity or low specific activity packages which do not pose a potentially significant hazard to the health and safety of the public.

Despite the exemption of these waste shipments from the advance notification requirement, it is expected that advance notifications for as many as 24,000 shipments may be required annually by 1985 under these proposed regulations.

Advance notification requirements for spent fuel shipments of 100 grams or greater mass are being addressed by the Commission in a separate rulemaking action in 10 CFR Part 73 for safeguards purposes. A companion covering this action is published elsewhere in this issue of the Federal Register. Only quantities of spent fuel of less than 100 grams mass requiring shipment in Type B packaging are covered in this proposed amendment to 10 CFR Part 71.

The proposed amendment to 10 CFR Part 71 will require licensees to supply the following information: the name, address, and telephone number of the shipper, carrier and receiver of the shipment, a description of the material to be transported, point of origin, estimated period of departure, estimated periods of arrival at state boundaries, the destination of the shipment, the estimated period of arrival, and a point of contact for current shipment information. This information would be provided to the offices of the governors of states affected by mail postmarked at

least seven days, or delivered by messenger at least four days, in advance of the estimated period of departure. A potential new information requirement contained in a recent DOT proposed rulemaking may lessen the impact of this amendment since shippers are on notice that they may need to develop procedures for reporting to DOT and can arrange to extend this effort to include NRC. The DOT "Highway Routing of Radioactive Materials: Proposed Rulemaking" (45 FR 7140) would require that route plans for large quantity shipments be submitted to the DOT Materials Transportation Bureau (proposed 49 CFR 173.22(c)). Some information would also be required for Type B quantity shipments (proposed 49 CFR 173.22(b)).

The proposed rule affects only NRC licensees, resulting, at the outset, in a situation where governors will not receive notification concerning a fraction of the total number of shipments, since some shipments of interest will be made by Agreement State licensees. This situation was anticipated, as noted in the additional views of several representatives (opposed to the requirement of Section 301) appearing at page 37 of H. Rept. 96-194, Part 2 (June 29, 1979):

Further, the NRC currently licenses possession of radioactive materials in only 25 states. Under agreements between the NRC and the remaining states, those states would also have to implement regulations under this amendment.



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NRC's Office of State Programs will work with the Agreement States to make regulations equivalent to the proposed rules a matter of compatibility.

### Proposed Rule

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, Section 301 of Public Law 96-295, and section 553 of Title 5 of the United States Code, notice is hereby given that adoption of the following amendments to 10 CFR Part 71 is contemplated.

1. In § 71.4, immediately following paragraph (q) a new introductory phrase and new paragraphs (r) and (s) are added to read as follows:

#### § 71.4 Definitions.

As used in this part:

(q) . . .

As used in §§ 71.5a-71.5b of this part:

(r) "Nuclear waste" means (1) any quantity of source, byproduct, or special nuclear material required by this part to be in Type B packaging while transported to, through, or across state boundaries to a disposal site, or to a collection point for transport to a disposal site, and (2) any quantity of irradiated fuel required by this part to be in Type B packaging while transported to, through, or across state boundaries irrespective of destination provided that the quantity of irradiated fuel is less than 100 grams mass.

(s) "State" means the several States of the Union, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands, and the Commonwealth of the Northern Mariana Islands.

2. Immediately following § 71.5, a new centerhead and new §§ 71.5a-71.5b are added to read as follows:

#### Advance Notification to States of Transport of Nuclear Waste

##### § 71.5a Transport of Nuclear Waste—Advance Notification Requirement.

Prior to the transport of any nuclear waste outside of the confines of his plant or other place of use or storage, or delivery of any nuclear waste to a carrier for transport, each licensee shall comply with the procedures in § 71.5b of this part for advance notification to the governor of a state for the transport of nuclear waste to, through, or across the boundary of the state.

##### § 71.5b Advance Notification of Shipment of Nuclear Waste; Revision Notice; Cancellation Notice.

(a) Where, when, and how advance notification must be sent.

The notification required by § 71.5a must be in writing to the office of each appropriate governor and to the Director, Office of Nuclear Material

Safety and Safeguards, U.S. Nuclear Regulatory Commission. A notification delivered by mail must be postmarked at least seven days before the beginning of the estimated seven day period of departure of the shipment. A notification delivered by messenger must reach the office of the governor at least four days before the beginning of the estimated seven day period of departure of the shipment.

(b) Information to be furnished in advance notification of shipment.

Each advance notification of shipment of nuclear waste must contain the following information:

(1) The name, address, and telephone number of the shipper, carrier, and receiver of the nuclear waste shipment.

(2) A description of the nuclear waste contained in the shipment as required by the regulations of the U.S. Department of Transportation in 49 CFR §§ 172.202 and 172.203(d).

(3) A plan which specifies

(i) The point of origin of the shipment, and the estimated seven day period of departure;

(ii) The estimated seven day period of arrival of the shipment at state boundaries;

(iii) The destination of the shipment, and the estimated seven day period of arrival; and

(iv) A point of contact with a telephone number for current shipment information.

(c) *Revision Notice.* A licensee who finds that schedule information previously furnished to a governor in accordance with § 71.5b(b)(3) will not be met, shall notify a responsible individual in the office of the governor of the state and inform that individual of the extent of the delay relative to the schedule originally reported in writing under the provisions of § 71.5b(b)(3). The licensee shall maintain a record of the name of the individual contacted for one year.

(d) *Cancellation notice.* (1) Each licensee described in paragraph (a) of this section who cancels a nuclear waste shipment for which advance notification has been sent shall send a cancellation notice to the governor of each state previously notified and to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission.

(2) The notice is to state that it is a cancellation and is to identify the advance notification which is being canceled.

UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS — ENERGY

**PART  
72**

**LICENSING REQUIREMENTS FOR THE STORAGE OF SPENT FUEL  
IN AN INDEPENDENT FUEL SPENT STORAGE INSTALLATION**

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72.93 Physical requirements.

**Authority.** The provisions of this Part 72 are issued under the Atomic Energy Act of 1954, as amended, secs. 51, 53 as amended, 57 as amended, 62, 63, 65, 69, 81 as amended, 161b, h, i, o, 182a as amended, 183 as amended, 184 as amended, 186, 187, Pub. L. 83-703, 68 Stat. 929, 930 as amended by 71 Stat. 576, 72 Stat. 632 and 79 Stat. 602, 932 as amended by 78 Stat. 605 and 88 Stat. 475, 933, 934, 935 as amended by 88 Stat. 475 and 92 Stat. 3039, 948, 953 as amended by 70 Stat. 1069, 954 as amended by 78 Stat. 602, 955 (42 U.S.C. 2071, 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2201(b), (h), (i), (j), (k), 2232, 2233, 2234, 2236, 2237); sec. 234, Pub. L. 91-161, 83 Stat. 444 (42 U.S.C. 2282); sec. 274c, as amended,

Pub. L. 86-273, 73 Stat. 688 as amended by Pub. L. 95-604, 92 Stat. 3036 (42 U.S.C. 2021(c)); under sec. 102(2)(C) of the National Environmental Policy Act of 1969, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332) and under the Energy Reorganization Act of 1974, as amended, sec. 201, as amended, 202, and 206, Pub. L. 93-438, 88 Stat. 1242, as amended by 89 Stat. 413, 1243, 1246 (42 U.S.C. 5841, 5842, 5846).

**Subpart A—General Provisions**

**§ 72.1 Purpose.**

The regulations in this part establish requirements, procedures, and criteria for the issuance of licenses to possess power reactor spent fuel and other radioactive materials associated with spent fuel storage, in an independent spent fuel storage installation (ISFSI), and the terms and conditions under which the Commission will issue such licenses.

**§ 72.2 Scope.**

(a) Licenses issued under this Part are limited to the possession of power reactor spent fuel to be stored in a complex that is designed and constructed specifically for the temporary storage of power reactor spent fuel aged for at least one year, and to the possession of other radioactive materials associated with spent fuel storage.

(b) The regulations in this part apply to all persons in the United States, including persons in Agreement States.

(c) The requirements of this regulation are applicable, as appropriate, to both wet and dry modes of storage of spent fuel.

(d) Licenses covering the storage of spent fuel in an existing spent fuel storage facility shall be issued in accordance with the requirements of this part as stated in § 72.31.

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### § 72.3 Definitions.

As used in this part: (a) "Act" means the Atomic Energy Act of 1954 (68 Stat. 919) including any amendments thereto.

(b) "As low as is reasonably achievable" (ALARA) means as low as is reasonably achievable taking into account the state of technology, and the economics of improvements in relation to (1) benefits to the public health and safety, (2) other societal and socioeconomic considerations, and (3) the utilization of atomic energy in the public interest.

(c) "Atomic energy" means all forms of energy released in the course of nuclear fission or nuclear transformation.

(d) "Byproduct material" means any radioactive material (except special nuclear material) yielded in, or made radioactive by exposure to, the radiation incident to the process of producing or utilizing special nuclear material.

(e) "Commission" means the Nuclear Regulatory Commission or its duly authorized representatives.

(f) "Commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the natural environment of a site, but does not mean:

(1) Changes desirable for the temporary use of the land for public recreational uses, necessary borings or excavations to determine subsurface materials and foundation conditions, or other preconstruction monitoring to establish background information related to the suitability of the site or to the protection of environmental values;

(2) Construction of environmental monitoring facilities;

(3) Procurement or manufacture of components of the installation; or

(4) Construction of means of access to the site as may be necessary to accomplish the objectives of sections (1) and (2) above.

(g) "Confinement systems" means those systems, including ventilation, that act as barriers between areas containing radioactive substances and the environment.

(h) "Controlled area" means that area immediately surrounding an ISFSI for which the licensee exercises authority over its use and within which ISFSI operations are performed.

(i) "Design bases" means that information that identifies the specific functions to be performed by a structure, system, or component of a facility and the specific values or ranges of values chosen for controlling parameters as reference bounds for design. These values may be restraints derived from generally accepted "state-of-the-art" practices for achieving functional goals

or requirements derived from analysis (based on calculation or experiments) of the effects of a postulated event under which a structure, system, or component must meet its functional goals. The values for controlling parameters for external events include: (1) estimates of severe natural events to be used for deriving design bases that will be based on consideration of historical data on the associated parameters, physical data, or analysis of upper limits of the physical processes involved and (2) estimates of severe external man-induced events to be used for deriving design bases that will be based on analysis of human activity in the region taking into account the site characteristics and the risks associated with the event.

(j) "Design capacity" means the quantity in metric tons of spent fuel, its maximum burnup in MWD/MTU, and the total heat generation in Btu per hour that an ISFSI is designed to accommodate.

(k) "Floodplain" means the lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands. Areas subject to a one percent or greater chance of flooding in any given year are included.

(l) "Historical data" means a compilation of the available published and unpublished information concerning a particular type of event.

(m) "Independent spent fuel storage installation" (ISFSI) means a complex designed and constructed for the storage of spent fuel and other radioactive materials associated with spent fuel storage. An ISFSI which is located on the site of another facility may share common utilities and services with such a facility and be physically connected with such other facility and still be considered to be independent, *provided* that such sharing of utilities and services or physical connections does not (i) increase the probability or consequences of an accident or malfunction of components, structures or systems that are important to safety; or (ii) reduce the margin of safety as defined in the basis for any technical specifications of either facility."

(n) "ISFSI-emergency planning zone" (ISFSI-EPZ) means that area in the vicinity of an ISFSI within which protective action measures may be needed in the event of an accident at an ISFSI.

(o) "NEPA" means the National Environmental Policy Act of 1969 including any amendments thereto.

(p) "Person" means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government

agency other than the Nuclear Regulatory Commission or the Department of Energy (DOE), except that the DOE shall be considered a person within the meaning of the regulations in this part to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission pursuant to Section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244); (2) any State; any political subdivision of a state, or any political entity within a State, (3) any foreign government or nation, or any political subdivision of any such government or nation, or other entity; and (4) any legal successor, representative, agent, or agency of the foregoing.

(q) "Population" means the people that may be affected by the change in environmental conditions due to the construction, operation, or decommissioning of an ISFSI.

(r) "Region" means the geographical area surrounding and including the site, which is large enough to contain (1) all the features related to a phenomenon or to a particular event that could potentially impact the safety of the ISFSI and (2) all measurable effects of environmental impact, both radiological and nonradiological, that are due to the construction, operation or decommissioning of an ISFSI.

(s) "Site" means the real property on which the ISFSI is located.

(t) "Source material" means (1) uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores that contain by weight one-twentieth of one percent (0.05%) or more of (i) uranium, (ii) thorium, or (iii) any combination thereof. Source material does not include special nuclear material.

(u) "Special nuclear material" means (1) plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing but does not include source material.

(v) "Spent fuel" as used in this Part means irradiated nuclear fuel that has undergone at least one year's decay since being used as a source of energy in a power reactor. Spent fuel includes the special nuclear material, byproduct material, source material, and other radioactive materials associated with fuel assemblies.

(w) "Structures, systems, and components important to safety" means those features of the ISFSI whose function is (1) to maintain the conditions

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issue a license or an amendment to a license without a hearing upon 30 days notice and publication once in the **Federal Register** of its intent to do so. The Commission may dispense with such 30 days' notice and publication with respect to an application for an amendment to a license issued under this Part upon a determination by the Commission that the amendment does not involve a significant hazards consideration or an unreviewed safety question.

### § 72.35 Changes, tests and experiments.

(a)(1) The holder of a license issued under this Part may, without prior Commission approval unless the proposed change, test or experiment involves a change in the license conditions incorporated in the license, an unreviewed safety question, significant increase in occupational exposure or a significant unreviewed environmental impact: (i) make changes in the ISFSI described in the Safety Analysis Report, (ii) make changes in the procedures described in the Safety Analysis Report, or (iii) conduct tests or experiments not described in the Safety Analysis Report.

(2) A proposed change, test, or experiment shall be deemed to involve an unreviewed safety question (i) if the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report may be increased; (ii) if a possibility for an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report may be created; or (iii) if the margin of safety as defined in the basis for any technical specification is reduced.

(b)(1) The licensee shall maintain records of changes in the ISFSI and of changes in procedures made pursuant to this section if such changes constitute changes in the ISFSI or procedures described in the Safety Analysis Report. The licensee shall also maintain records of tests and experiments carried out pursuant to paragraph (a) of this section. These records shall include a written safety evaluation that provides the bases for the determination that the change, test, or experiment does not involve an unreviewed safety question. The records of changes in the ISFSI and of changes in procedures and records of tests shall be maintained for the lifetime of the ISFSI.

(2) Annually, or at such shorter interval as may be specified in the license, the licensee shall furnish to the appropriate regional office, specified in Appendix D of Part 20 of this chapter,

with a copy to the Director, Office of Nuclear Material and Safeguards, a report containing a brief description of such changes, tests, and experiments, including a summary of the safety evaluation of each. Any report submitted by a licensee pursuant to this paragraph will be made a part of the public record pertaining to this license.

(c) The holder of a license issued under this Part who desires (1) to change the license conditions, (2) to change the ISFSI or the procedures described in the Safety Analysis Report, or (3) to conduct tests or experiments not described in the Safety Analysis Report that involve an unreviewed safety question, a significant increase in occupational exposure, or significant unreviewed environmental impact, shall submit an application for amendment of the license, pursuant to § 72.39 of this Part.

### § 72.36 Transfer of licenses.

(a) No license or any right included in a license issued under this Part shall be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission gives its consent in writing.

(b)(1) An application for transfer of a license shall include as much of the information described in §§ 72.14 and 72.17 of this Part with respect to the identity and the technical and financial qualifications of the proposed transferee as would be required by those sections if the application were for an initial license. The application shall also include a statement of the purposes for which the transfer of the license is requested and the nature of the transaction necessitating or making desirable the transfer of the license.

(2) The Commission may require any person who submits an application for the transfer of a license pursuant to the provisions of this section to file a written consent from the existing licensee, or a certified copy of an order or judgment of a court of competent jurisdiction, attesting to the person's right—subject to the licensing requirements of the Act and these regulations—to possession of the spent fuel and the ISFSI involved.

(c) After appropriate notice to interested persons, including the existing licensee, and observance of such procedures as may be required by the Act or regulations or orders of the Commission, the Commission will approve an application for the transfer of a license, if the Commission determines:

(1) That the proposed transferee is qualified to be the holder of the license; and

(2) That transfer of the license is consistent with applicable provisions of the law, and the regulations and orders issued by the Commission pursuant thereto.

### § 72.37 Creditor regulations.

(a) Pursuant to section 184 of the Act, the Commission consents, without individual application, to the creation of any mortgage, pledge, or other lien on special nuclear material contained in spent fuel not owned by the United States that is the subject of a license or on any interest in such special nuclear material in spent fuel: *Provided:*

(1) That the rights of any creditor so secured may be exercised only in compliance with and subject to the same requirements and restrictions as would apply to the licensee pursuant to the provisions of the license, the Atomic Energy Act of 1954, as amended, and regulations issued by the Commission pursuant to said Act; and

(2) That no creditor so secured may take possession of the spent fuel pursuant to the provisions of this section prior to either the issuance of a license from the Commission authorizing such possession or the transfer of the license.

(b) Any creditor so secured may apply for transfer of the license covering such spent fuel by filing an application for transfer of the license pursuant to § 72.38(b). The Commission will act upon such application pursuant to § 72.38(c).

(c) Nothing contained in this regulation shall be deemed to affect the means of acquiring, or the priority of, any tax lien or other lien provided by law.

(d) As used in this section, "creditor" includes, without implied limitation, the trustee under any mortgage, pledge, or lien on spent fuel in storage made to secure any creditor; any trustee or receiver of such spent fuel appointed by a court of competent jurisdiction in any action brought for the benefit of any creditor secured by such mortgage, pledge, or lien; any purchaser of such spent fuel at the sale thereof upon foreclosure of such mortgage, pledge, or lien or upon exercise of any power of sale contained therein; or any assignee of any such purchaser.

### § 72.38 Applications for termination of licenses.

(a) The licensee shall apply to the Commission for authority to surrender a license voluntarily and to decommit the ISFSI and dispose of the materials stored therein. The Commission may



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require information, including information as to proposed procedures for the disposal of radioactive material and decontamination of the site, to determine whether there is reasonable assurance that the decommissioning and disposal will be performed in accordance with the regulations in this chapter and will not be inimical to the common defense and security or to the health and safety of the public.

(b) Upon a finding of reasonable assurance that the decommissioning of the ISFSI and disposal of the materials stored therein will be performed in accordance with the regulations in this chapter and will provide adequate protection to the health and safety of the public, and after notice to interested persons, the Commission will authorize such decommissioning and disposal and terminate the license upon completion of such procedures in accordance with any conditions specified in the authorization.

### § 72.39 Application for amendment of license.

Whenever a holder of a license desires to amend the license, an application for an amendment shall be filed with the Commission fully describing the changes desired and the reasons for such changes, and following as far as applicable the form prescribed for original applications.

### § 72.40 Issuance of amendment.

In determining whether an amendment to a license will be issued to the applicant, the Commission will be guided by the considerations that govern the issuance of initial licenses.

### § 72.41 Modification, revocation, and suspension of licenses.

(a) The terms and conditions of all licenses are subject to amendment, revision, or modification by reason of amendments to the Atomic Energy Act of 1954, or by reason of rules, regulations, or orders issued in accordance with the Act or any amendments thereto.

(b) Any license may be modified, revoked, or suspended in whole or in part for any of the following: (i) for any material false statement in the application or in any statement of fact required under Section 182 of the Act; (ii) conditions revealed by such application or statement of fact or any report, record, inspection or other means which would warrant the Commission to refuse to grant a license on an original application; (iii) failure to operate an ISFSI in accordance with the terms of the license; (iv) violation of, or failure to observe any of, the terms and conditions of the Act, or of any applicable

regulation, license, or order of the Commission.

(c) Upon revocation of a license, the Commission may immediately cause the retaking of possession of all special nuclear material contained in spent fuel held by the licensee. In cases found by the Commission to be of extreme importance to the national defense and security or to the health and safety of the public, the Commission prior to following any of the procedures provided under sections 551-558 of title 5 of the United States Code, may cause the taking of possession of any special nuclear material contained in spent fuel held by the licensee.

### § 72.42 Backfitting.

(a) The Commission may require the backfitting of an ISFSI if it finds that such action will provide substantial additional protection to the environment, or occupational or public health and safety. As used in this section, "backfitting" means the addition, elimination, or modification of structures, systems, or components of an ISFSI after the license has been issued.

(b) The Commission may at any time require a holder of a license to submit such information concerning the backfitting or the proposed backfitting of the ISFSI as it deems appropriate.

### Subpart D—Records, Reports, Inspections, and Enforcement

### § 72.50 Safety analysis report updating.

(a) The design, description of planned operations, and other information submitted in the Safety Analysis Report shall be updated by the licensee and submitted to the Commission at least once every six months after issuance of the license during final design and construction, until preoccupational testing is completed, with final completion and submittal to the Commission at least 90 days prior to the planned receipt of spent fuel. This final submittal shall include a final analysis and evaluation of the design and performance of structures, systems, and components that are important to safety taking into account any pertinent information developed since the submittal of the license application. Changes affecting safety margins will require Commission approval prior to the receipt of spent fuel.

(b) After the first receipt of spent fuel for storage, the Safety Analysis Report shall be updated annually and submitted to the Commission by the licensee. This submittal shall include the following:

(1) New or revised information relating to applicable site evaluation

factors, including the results of environmental monitoring programs.

(2) A description and analysis of changes in the structures, systems, and components of the ISFSI, with emphasis upon (i) performance requirements, (ii) the bases, with technical justification therefor, upon which such requirements have been established, and (iii) evaluations showing that safety functions will be accomplished.

(3) An analysis of the significance of any changes to codes, standards, regulations, or regulatory guides which the licensee has committed to meeting the requirements that are applicable to the design, construction, or operation of the ISFSI.

### § 72.51 Material balance, inventory, and records requirements for stored materials.

(a) Each licensee shall keep records showing the receipt, inventory (including location), disposal, acquisition, and transfer of all spent fuel in storage.

(b) Each licensee shall conduct a physical inventory of all spent fuel in storage at intervals not to exceed twelve months unless otherwise directed by the Commission.

(c) Each licensee shall establish, maintain, and follow written material control and accounting procedures that are sufficient to enable the licensee to account for the spent fuel in storage.

(d) Records of spent fuel in storage shall be kept in duplicate. The duplicate set of records shall be kept at a separate location sufficiently remote from the original records that a single event would not destroy both sets of records. Records of spent fuel transferred out of an ISFSI shall be preserved for a period of five years after the date of transfer.

### § 72.52 Reports of accidental criticality or loss of special nuclear material.

Each licensee shall report immediately to the appropriate NRC regional Office specified in Appendix D of Part 20 of this chapter by telephone and telegram or teletype, any case of accidental criticality and any loss of special nuclear material.

### § 72.53 Material status reports.

Each licensee shall complete and submit Material Status Reports to the Commission on Form NRC-742, in accordance with printed instructions for completing the form. The reports shall provide information concerning the special nuclear material contained in spent fuel possessed, received, transferred, disposed of, or lost by the licensee. All such reports shall be made as of March 31 and September 30 of each year and shall be filed with the U.S.

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Department of Energy, P.O. Box E, Oak Ridge, Tennessee 37830, within 30 days after the end of the period covered by the report. The Commission may, when good cause is shown, permit a licensee to submit Material Status Reports at other times.

### § 72.54 Nuclear material transfer reports.

Whenever the licensee transfers or receives spent fuel, the licensee shall complete and distribute a Nuclear Material Transaction Report on Form NRC-741. Each licensee who transfers spent fuel shall submit a copy of form NRC-741 to the U.S. Department of Energy, P.O. Box E, Oak Ridge, Tennessee 37830, and three copies to the receiver of the material promptly after the transfer takes place. Each licensee who receives spent fuel shall submit a copy of form NRC-741 to the Department of Energy and to the shipper of the material within 10 days after the spent fuel is received and unloaded and its identity is verified.

### § 72.55 Other records and reports.

(a) Each licensee shall maintain any records and make any reports that may be required by the conditions of the license or by the rules, regulations, and orders of the Commission in effectuating the purposes of the Act.

(b) Each licensee shall furnish a copy of its annual financial report, including the certified financial statements, to the Commission.

(c) Records that are required by the regulations in this part or by the license conditions shall be maintained for the period specified by the appropriate regulation or license condition. If a retention period is not otherwise specified, such records shall be maintained until the Commission authorizes their disposition.

(d) Any record that must be maintained pursuant to this Part may be either the original or a reproduced copy or microform provided that any reproduced copy or microform is duly authenticated by authorized personnel and that the microform is capable of producing a clear and legible copy after storage for the period specified by commission regulations.

### § 72.56 Inspections and tests.

(a) Each licensee under this part shall permit inspection by duly authorized representatives of the Commission of his records, premises, activities and of spent fuel in possession related to the specific license as may be necessary to effectuate the purposes of the Act, including Section 105 of the Act.

(b) Each licensee under this Part shall make available to the Commission for

inspection, upon reasonable notice, records kept by the licensee pertaining to his receipt, possession, or transfer of spent fuel.

(c)(1) Each licensee under this Part shall upon request by the Director, Office of Inspection and Enforcement provide rent-free office space for the exclusive use of the Commission inspection personnel. Heat, air conditioning, light, electrical outlets and janitorial services shall be furnished by each licensee. The office shall be convenient to and have full access to the installation and shall provide the inspector both visual and acoustic privacy.

(2) For a site with a single storage installation the space provided shall be adequate to accommodate a full-time inspector, a part-time secretary and transient NRC personnel and will be generally commensurate with other office facilities at the site. A space of 250 sq. ft., either within the site's office complex or in an office trailer, or other on site space, is suggested as a guide. For sites containing multiple facilities additional space may be requested to accommodate additional full-time inspectors. The office space that is provided shall be subject to the approval of the Director, Office of Inspection and Enforcement. All furniture, supplies and Commission equipment shall be furnished by the Commission.

(3) Each licensee under this Part shall afford any NRC resident inspector assigned to that site, or other NRC inspectors identified by the Regional Director as likely to inspect the installation, immediate unfettered access, equivalent to access provided regular plant employees, following proper identification and compliance with applicable access control measures for security, radiological protection and personal safety.

(d) Each licensee shall perform, or permit the Commission to perform, such tests as the Commission deems appropriate or necessary for the administration of the regulations in this part.

(e) A report of the preoperational test acceptance criteria and test results shall be submitted to the appropriate regional office specified in Appendix D of Part 20 of this chapter with a copy to the Director, Office of Nuclear Material Safety and Safeguards at least 30 days prior to the receipt of spent fuel.

### § 72.57 Violation.

An injunction or other court order may be obtained prohibiting any violation of any provision of the Atomic Energy Act of 1954, as amended, or title

II of the Energy Reorganization Act of 1974, as amended, or any regulation or order issued thereunder. A court order may be obtained for the payment of a civil penalty imposed pursuant to section 234 of the Atomic Energy Act for violation of §§ 53, 57, 62, 63, 81, or 82 of the Atomic Energy Act, or section 206 of the Energy Reorganization Act of 1974, or any rule, regulation, or order issued thereunder, or any term, condition, or limitation of any license issued thereunder, or for any violation for which a license may be revoked under section 186 of the Atomic Energy Act. Any person who willfully violates any provision of the Atomic Energy Act, or any regulation or order issued thereunder, may be guilty of a crime and, upon conviction, may be punished by fine or imprisonment or both, as provided by law.

## Subpart E—Siting Evaluation Factors

### § 72.61 General considerations.

(a) Site characteristics that may directly affect the safety or environmental impact of the ISFSI shall be investigated and assessed.

(b) Proposed sites for the ISFSI shall be examined with respect to the frequency and the severity of external natural and man-induced events that could affect the safe operation of the ISFSI.

(c) Design basis external events shall be determined for each combination of proposed site and proposed ISFSI design.

(d) Proposed sites with design basis external events for which adequate protection cannot be provided through ISFSI design shall be deemed unsuitable for the location of the ISFSI.

(e) For each proposed site, pursuant to Part 51 of this chapter, the potential for radiological and other environmental impacts on the region shall be evaluated with due consideration of the characteristics of the population, including its distribution, and of the regional environs, including its historical and esthetic values.

(f) The facility shall be sited so as to avoid to the extent possible the long-term and short-term adverse impacts associated with the occupancy and modification of floodplains.

### § 72.62 Design basis external natural events.

(a) Natural phenomena that may exist or that can occur in the region of a proposed site shall be identified and assessed according to their potential effects on the safe operation of the ISFSI. The important natural phenomena

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that affect the ISFSI design shall be identified.

(b) Records of the occurrence and severity of those important natural phenomena shall be collected for the region and evaluated for reliability, accuracy, and completeness.

(c) Appropriate methods shall be adopted for evaluating the design basis natural events based on the characteristics of the region and the current state of knowledge about such events.

### § 72.63 Design basis external man-induced events.

(a) The region shall be examined for both past and present man-made facilities and activities that might endanger the proposed ISFSI. The important potential man-induced events that affect the ISFSI design shall be identified.

(b) Information concerning the potential occurrence and severity of such events shall be collected and evaluated for reliability, accuracy, and completeness.

(c) Appropriate methods shall be adopted for evaluating the design basis external man-induced events, based on the current state of knowledge about such events.

### § 72.64 Identifying regions around an ISFSI site.

(a) The regional extent of external phenomena, man-made or natural, that are used as a basis for the design of the ISFSI shall be defined.

(b) The potential regional impact due to the construction, operation or decommissioning of the ISFSI shall be identified. The extent of such regional impacts shall be determined on the basis of potential measurable effects on the population or the environment, from ISFSI activities.

(c) Those regions identified pursuant to paragraphs (a) and (b) of this section shall be investigated as appropriate with respect to (i) the present and future character and the distribution of population, (ii) consideration of present and projected future uses of land and water within the region, and (iii) any special characteristics that may influence the potential consequences of a release of radioactive material during the operational lifetime of the ISFSI.

(d) If the distribution of population in any defined region is such that adequate protective action cannot be provided through emergency planning the proposed site shall be unsuitable for the location of an ISFSI.

### § 72.65 Defining potential effects of the ISFSI on the region.

(a) The proposed site shall be evaluated with respect to the effects on populations in the region resulting from the release of radioactive materials under normal and accident conditions during operation and decommissioning of the ISFSI; in this evaluation both usual and unusual regional and site characteristics shall be taken into account.

(b) Each site shall be evaluated with respect to the effects on the regional environment resulting from construction, operation and decommissioning of the ISFSI; in this evaluation both usual and unusual regional and site characteristics shall be taken into account.

### § 72.66 Geological and seismological characteristics.

(a) *Massive Water Basin and Air-Cooled Canyon Types of ISFSI Structures:*

(1) East of the Rocky Mountain Front (east of approximately 104° west longitude), except in areas of known seismic activity including but not limited to the regions around New Madrid, Mo., Charleston, S.C., and Attica, N.Y., sites will be acceptable if the results from onsite foundation and geological investigation, literature review, and regional geological reconnaissance show no unstable geological characteristics, soil stability problems, or potential for vibratory ground motion at the site in excess of an appropriate response spectrum anchored at 0.2 g.

(2) West of the Rocky Mountain Front (west of approximately 104° west longitude), and in other areas of known potential seismic activity, seismicity will be evaluated by the techniques of Appendix A of Part 100 of this chapter. Sites that lie within the range of strong near-field ground motion from historical earthquakes on large capable faults should be avoided.

(3) Sites other than bedrock sites shall be evaluated for their liquefaction potential or other soil instability due to vibratory ground motion.

(4) Site-specific investigations and laboratory analyses must show that soil conditions are adequate for the proposed foundation loading.

(5) In an evaluation of alternative sites, those which require a minimum of engineered provisions to correct site deficiencies are preferred. Sites with unstable geologic characteristics should be avoided.

(6) The ISFSI design earthquake (ISFSI-DE) for use in the design of structures shall be determined as follows:

(a) For sites that have been evaluated under the criteria of Appendix A of 10 CFR Part 100, the ISFSI-DE shall be equivalent to the safe shutdown earthquake (SSE) for a nuclear power plant.

(b) For those sites that have not been evaluated under the criteria of Appendix A of 10 CFR Part 100, that are east of the Rocky Mountain Front, and that are not in areas of known seismic activity, a standardized ISFSI-DE described by an appropriate response spectrum anchored at 0.25 g may be used. Alternatively, a site-specific ISFSI-DE may be determined by using the criteria and level of investigations required by Appendix A of Part 100 of this chapter.

(c) Regardless of the results of the investigations anywhere in the continental U.S., the ISFSI-DE shall have a value for the horizontal ground motion of no less than 0.10 g with the appropriate response spectrum.

(b) *Other types of ISFSI Designs.*

For ISFSI designs that do not use massive water basins or air-cooled canyons, such as canisters, casks, or silos, a site specific investigation is required to establish site suitability commensurate with the specific requirements of the proposed ISFSI.

### § 72.67 Criteria for radioactive materials in effluents and direct radiation from an ISFSI.

(a) During normal operations and anticipated occurrences, the annual dose equivalent to any real individual who is located beyond the controlled area shall not exceed 25 mrem to the whole body, 75 mrem to the thyroid and 25 mrem to any other organ as a result of exposure to (1) planned discharges of radioactive materials, radon and its daughters excepted, to the general environment, (2) direct radiation from ISFSI operations and (3) any other radiation from uranium fuel cycle operations within the region.

(b) Operational restrictions shall be established to meet as low as is reasonably achievable objectives for radioactive materials in effluents and direct radiation levels associated with ISFSI operations.

(c) Operational limits shall be established for radioactive materials in effluents and direct radiation levels associated with ISFSI operations to meet the limits given in paragraph (a) of this section.

### § 72.68 Controlled area of an ISFSI.

(a) For each ISFSI site, a controlled area shall be established.

(b) Any individual located on or beyond the nearest boundary of the controlled area shall not receive a dose greater than 5 rem to the whole body or



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any organ from any design basis accident. The minimum distance from the spent fuel handling and storage facilities to the nearest boundary of the controlled area shall be at least 100 meters.

(c) The controlled area may be traversed by a highway, railroad or waterway, so long as appropriate and effective arrangements are made to control traffic and to protect the public health and safety.

### 72.69 ISFSI emergency planning zone.

(a) For each ISFSI site, an ISFSI Emergency Planning Zone (ISFSI-EPZ) shall be established. The ISFSI-EPZ shall provide reasonable assurance that protective actions beyond its outer boundary would not be necessary.

(b) The boundaries of an ISFSI-EPZ for a particular ISFSI will be determined on a case-by-case basis taking into account both the characteristics of the specific facility and local conditions such as demography, topography, land characteristics, access routes and local jurisdictional boundaries.

### § 72.70 Spent fuel transportation.

The proposed ISFSI shall be evaluated with respect to the potential impact on the environment of spent fuel being transported into the area.

## Subpart F—General Design Criteria

### § 72.71 General Considerations.

Pursuant to the provisions of § 72.15 of this Part, an application to store spent fuel in an ISFSI must include the design criteria for the proposed storage complex. These design criteria establish the design, fabrication, construction, testing, and performance requirements for structures, systems, and components important to safety as defined in § 72.3. The general design criteria identified in this section establish minimum requirements for the design criteria for an ISFSI. Any omissions in these general design criteria do not relieve the applicant from the requirement of providing the necessary safety features in the design of the ISFSI.

### § 72.72 Overall requirements.

(a) *Quality Standards.*—Structures, systems, and components important to safety shall be designed, fabricated, erected, and tested to quality standards commensurate with the importance to safety of the function to be performed.

(b) *Protection against environmental conditions and natural phenomena.*—(1) Structures, systems, and components important to safety shall be designed to accommodate the effects of, and to be compatible with, site characteristics and environmental conditions associated

with normal operation, maintenance, and testing of the ISFSI; and to withstand postulated accidents.

(2) Structures, systems, and components important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, lightning, hurricanes, floods, tsunami, and seiches, without impairing their capability to perform safety functions. The design bases for these structures, systems, and components shall reflect (i) appropriate consideration of the most severe of the natural phenomena reported for the site and surrounding area, with appropriate margins to take into account the limitations of the data and the period of time in which the data have accumulated, and (ii) appropriate combinations of the effects of normal and accident conditions and the effects of natural phenomena. An ISFSI need not be protected from tornado missiles but should be designed to prevent massive collapse of building structures or the dropping of heavy objects on to the stored spent fuel as a result of building structural failures.

(3) Capability shall be provided for determining the intensity of natural phenomena that may occur for comparison with design bases of structures, systems, and components important to safety.

(4) If the ISFSI is located over an aquifer which is a major water resource, measures shall be taken to preclude the transport of radioactive materials to the environment through this potential pathway.

### (c) Protection Against Fires and Explosions.

Structures, systems, and components important to safety shall be designed and located so that they can continue to perform their safety functions effectively under credible fire and explosion exposure conditions. Noncombustible and heat-resistant materials shall be used wherever practical throughout the ISFSI, particularly in locations vital to the control of radioactive materials and to the maintenance of safety control functions. Explosion and fire detection, alarm, and suppression systems shall be designed and provided with sufficient capacity and capability to minimize the adverse effects of fires and explosions on structures, systems, and components important to safety. The design of the ISFSI shall include provisions to protect against adverse effects that might result from either the operation or the failure of the fire suppression system.

(d) *Sharing of structures, systems, and components.*—Structures, systems, and components important to safety shall not be shared between an ISFSI and

other facilities unless it is shown that such sharing will not impair the capability of either facility to perform its safety functions, including the ability to return to a safe condition in the event of an accident.

(e) *Proximity of sites.*—An ISFSI located near other nuclear facilities shall be designed and operated to ensure that the cumulative effects of their combined operations will not constitute an unreasonable risk to the health and safety of the public.

(f) *Testing and maintenance of systems and components.*—Systems and components that are important to safety shall be designed to permit inspection, maintenance, and testing.

(g) *Emergency capability.*—Structures, systems, and components important to safety shall be designed for emergencies. The design shall provide for accessibility to the equipment of onsite and available offsite emergency facilities and services such as hospitals, fire and police departments, ambulance service, and other emergency agencies.

(h) *Confinement barriers and systems.*—(1) The fuel cladding shall be protected against degradation and gross ruptures.

(2) For underwater storage of spent fuel in which the pool water serves as a shield and a confinement medium for radioactive materials, systems designed for maintaining water purity and the pool water level shall be designed so that any abnormal operations or failure in those systems from any cause will not cause the water level to fall below safe limits. The design shall preclude installations of drains, permanently connected systems, and other features that could by abnormal operations or failure cause a significant loss of water. Pool water level equipment shall be provided to alarm in a continuously manned location if the water level in the fuel storage pools falls below a predetermined level.

(3) Ventilation and off-gas systems shall be provided where necessary to ensure the confinement of airborne radioactive particulate materials during normal or off-normal conditions.

(i) *Instrumentation and control systems.*—Instrumentation and control systems shall be provided to monitor systems that are important to safety over anticipated ranges for normal operation and off-normal operation. Those instruments and control systems that must remain operational under accident conditions shall be identified in the Safety Analysis Report.

(j) *Control room or control areas.*—A control room or control areas shall be designed to permit occupancy and actions to be taken to monitor the ISFSI



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safely under normal conditions, and to provide safe control of the ISFSI under off-normal or accident conditions.

(k) *Utility services.*—(1) Each utility service system shall be designed to meet emergency conditions. The design of utility services and distribution systems that are important to safety shall include redundant systems to the extent necessary to maintain, with adequate capacity, the ability to perform safety functions assuming a single failure.

(2) Emergency utility services shall be designed to permit testing of the functional operability and capacity, including the full operational sequence, of each system for transfer between normal and emergency supply sources; and to permit the operation of associated safety systems.

(3) Provisions shall be made so that, in the event of a loss of the primary electric power source or circuit, reliable and timely emergency power will be provided to instruments, utility service systems, the central security alarm station, and operating systems, in amounts sufficient to allow safe storage conditions to be maintained and to permit continued functioning of all systems essential to safe storage.

### § 72.73 Criteria for nuclear criticality safety.

(a) *Design for criticality safety.*—Spent fuel handling, transfer, and storage systems shall be designed to be maintained subcritical and to prevent a nuclear criticality accident. The design of handling, transfer, and storage systems shall include margins of safety for the nuclear criticality parameters that are commensurate with the uncertainties in the handling, transfer and storage conditions, in the data and methods used in calculations, and in the nature of the immediate environment under accident conditions.

(b) *Methods of criticality control.*—The design of an ISFSI shall be based on either favorable geometry (spacing) or permanently fixed neutron absorbing materials (poisons). Where solid neutron absorbing materials are used, the design shall provide for positive means to verify their continued efficacy. In criticality design analyses for underwater storage systems, credit can be taken for the neutron absorption of rack structures and the water within the storage unit.

### § 72.74 Criteria for radiological protection.

(a) *Exposure control.*—Radiation protection systems shall be provided for all areas and operations where onsite personnel may be exposed to radiation or airborne radioactive materials. Structures, systems, and components for

which operation, maintenance, and required inspections may involve such exposure shall be designed, fabricated, located, shielded, controlled, and tested so as to control external and internal radiation exposures to personnel. The design shall include means to:

(1) prevent the accumulation of radioactive material in those systems requiring access;

(2) decontaminate those systems to which access is required;

(3) control access to areas of potential contamination or high radiation within the ISFSI;

(4) measure and control contamination of areas requiring access;

(5) minimize the time required to perform work in the vicinity of radioactive components; for example, by providing sufficient space for ease of operation and designing equipment for ease of repair and replacement; and

(6) shield personnel from radiation exposure.

(b) *Radiological alarm systems.*—Radiological alarm systems shall be provided in accessible work areas to warn operating personnel of radiation and airborne radioactivity levels above a given setpoint and of concentrations of radioactive material in effluents above control limits. Such systems shall be designed with provisions for calibration and testing their operability.

(c) *Effluent and direct radiation monitoring.*—

(1) Effluent systems shall be provided with means for measuring the amount of radionuclides in effluents during normal operations and under accident conditions. A means of measuring the flow of the diluting medium, either air or water, shall also be provided.

(2) Areas containing radioactive materials shall be provided with systems for measuring the direct radiation levels in and around these areas.

(d) *Effluent Control.*

The ISFSI shall be designed to provide means to limit to levels as low as is reasonably achievable the release of radioactive materials in effluents during normal operations; and control the release of radioactive materials under accident conditions. Analyses shall be made to show that releases to the general environment during normal operations and anticipated occurrences will be within the exposure limits given in § 72.67. Analyses of design basis accidents shall be made, to show that releases to the general environment will be within the exposure limits given in § 72.68. Systems designed to monitor the release of radioactive materials shall have means for calibration and testing their operability.

### § 72.75 Criteria for spent fuel and radioactive waste storage and handling.

(a) *Spent Fuel and Radioactive Waste Storage and Handling Systems.*

Spent fuel storage, radioactive waste storage, and other systems that might contain or handle radioactive materials associated with spent fuel, shall be designed to ensure adequate safety under normal and accident conditions. These systems shall be designed with (1) a capability to test and monitor components important to safety, (2) suitable shielding for radiation protection under normal and accident conditions, (3) confinement structures and systems, (4) a heat-removal capability having testability and reliability consistent with its importance to safety, and (5) means to minimize the quantity of radioactive wastes generated.

(b) *Waste Treatment.*

Radioactive waste treatment facilities shall be provided. Provisions shall be made for the packaging of site-generated low level wastes in a form suitable for transfer to disposal sites.

### § 72.76 Criteria for decommissioning.

The ISFSI shall be designed for decommissioning. Provisions shall be made to facilitate decontamination of structures and equipment, minimize the quantity of radioactive wastes and contaminated equipment, and facilitate the removal of radioactive wastes and contaminated materials at the time the ISFSI is permanently decommissioned.

## Subpart G—Quality Assurance

### § 72.80 Quality assurance program; Records.

(a) A quality assurance program based on the criteria in Appendix B to Part 50 of this chapter shall be established and implemented for the structures, systems, and components of an ISFSI that are important to safety. The application of the quality assurance program should be commensurate with the importance to safety of identified activities and individual structures, systems, and components.

(b) The quality assurance program shall cover all activities identified as being important to safety throughout the life of the licensed activity—from site selection through decommissioning—prior to termination of the license.

(c) Appropriate records of the design, fabrication, erection, testing, maintenance and occupation of structures, systems, and components important to safety shall be maintained by or under the control of the licensee throughout the life of the ISFSI.

UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

**PART  
73**

**PHYSICAL PROTECTION OF PLANTS AND MATERIALS**

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Appendix D—Physical Protection of Irradiated Reactor Fuel in Transit, Training Program Subject Schedule

**Authority:** Secs. 53, 161b, 161i, 161o, Pub. L. 83-703, 68 Stat. 930, 948-50, as amended Pub. L. 85-507, 72 Stat. 327, Pub. L. 93-377, 88 Stat. 475 (42 U.S.C. 2073, 2201); sec. 201, Pub. L. 93-438, 88 Stat. 1242, 1243, as amended Pub. L. 94-79, 89 Stat. 413 (42 U.S.C. 5841).

**§ 73.1 Purpose and scope.**

(a) *Purpose.* This part prescribes requirements for the establishment and maintenance of a physical protection system which will have capabilities for the protection of special nuclear material at fixed sites and in transit and of plants in which special nuclear material is used. The following design basis threats, where referenced in ensuing sections of this part, shall be used to design safeguards systems to protect against acts of radiological sabotage and to prevent the theft of special nuclear material:

(1) *Radiological Sabotage.* (i) A determined violent external assault, attack by stealth, or deceptive actions, of several persons with the following attributes, assistance and equipment: (A) Well-trained (including military training and skills) and dedicated individuals, (B) inside assistance which may include a knowledgeable individual who attempts to participate in a passive role (e.g., provide information), an active role (e.g., facilitate entrance and exit, disable alarms and communications, participate in violent attack), or both, (C) suitable weapons, up to and including hand-held automatic weapons, equipped with silencers and having effective long range accuracy, (D) hand-carried equipment, including incapacitating agents and explosives for use as tools of entry or for otherwise destroying reactor, facility, transporter, or container integrity or features of the safeguards system, and

(ii) An internal threat of an insider, including an employee (in any position).  
(2) *Theft or Diversion of Formula Quantities of Strategic Special Nuclear Material.* (i) A determined violent external

assault, attack by stealth, or deceptive actions, by a small group with the following attributes, assistance and equipment: (A) Well-trained (including military training and skills) and dedicated individuals, (B) inside assistance which may include a knowledgeable individual who attempts to participate in a passive role (e.g., provide information), an active role (e.g., facilitate entrance and exit, disable alarms and communications, participate in violent attack), or both, (C) suitable weapons, up to and including hand-held automatic weapons, equipped with silencers and having effective long range accuracy, (D) hand-carried equipment, including incapacitating agents and explosives for use as tools of entry or for otherwise destroying reactor, facility, transporter or container integrity or features of the safeguards system, and (E) the ability to operate as two or more teams,

(ii) An individual, including an employee (in any position), and  
(iii) A conspiracy between individuals in any position who may have: (A) Access to and detailed knowledge of nuclear power plants or the facilities referred to in § 73.20(a), or (B) items that could facilitate theft of special nuclear material (e.g., small tools, substitute material, false documents, etc.), or both.

(b) *Scope.* (1) This part prescribes requirements for (i) the physical protection of production and utilization facilities licensed pursuant to Part 50 of this chapter, (ii) the physical protection of plants in which activities licensed pursuant to Part 70 of this chapter are conducted, and (iii) the physical protection of special nuclear material by any person who, pursuant to the regulations in Part 70 of this chapter, possesses or uses at any site or contiguous sites subject to the control by the licensee, formula quantities of strategic special nuclear material or special nuclear material of moderate strategic significance or special nuclear material of low strategic significance.

(2) This part prescribes requirements for the physical protection of special nuclear material in transportation by any person who is licensed pursuant to the regulations in Part 70 and Part 110 of this chapter who imports, exports, transports, delivers to a carrier for

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transport in a single shipment, or takes delivery of a single shipment free on board (F.O.B.) where it is delivered to a carrier, formula quantities of strategic special nuclear material, special nuclear material of moderate strategic significance or special nuclear material of low strategic significance.

(3) This part also applies to shipments by air of special nuclear material in quantities exceeding (i) 20 grams or 20 curies, whichever is less, of plutonium or uranium-233, or (ii) 350 grams of uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope).

(4) Special nuclear material subject to this part may also be protected pursuant to security procedures prescribed by the Commission or another Government agency for the protection of classified materials. The provisions and requirements of this part are in addition to, and not in substitution for, any such security procedures. Compliance with the requirements of this part does not relieve any licensee from any requirement or obligation to protect special nuclear material pursuant to security procedures prescribed by the Commission or other Government agency for the protection of classified materials.

(5) This part also applies to the shipment of irradiated reactor fuel in quantities that in a single shipment both exceed 100 grams in net weight of irradiated fuel, exclusive of cladding or other structural or packaging material, and have a total radiation dose in excess of 100 rems per hour at a distance of 3 feet from any accessible surface without intervening shielding.

(6) This part prescribes requirements for the physical protection of spent fuel stored in an independent spent fuel storage installation (ISFSI) licensed under Part 72 of this Chapter.

### § 73.2 Definitions.

As used in this part:

(a) Terms defined in Parts 50 and 70 of this chapter have the same meaning when used in this part.

(b) "Authorized individual" means any individual, including an employee, a student, a consultant, or an agent of a licensee who has been designated in writing by a licensee to have responsibility for surveillance of or control over special nuclear material or to have unescorted access to areas where special nuclear material is used or stored.

(c) "Guard" means a uniformed individual armed with a firearm whose primary duty is the protection of special nuclear material against theft, the protection of a plant against radiological sabotage, or both.

(d) "Watchman" means an individual, not necessarily uniformed or armed with a firearm, who provides protection for a plant and the special nuclear material therein in the course of performing other duties.

(e) "Continuous visual surveillance" means unobstructed view at all times of a shipment of special nuclear material, and of all access to a temporary storage area or cargo compartment containing the shipment.

(f) "Physical barrier" means

(1) Fences constructed of No. 11 American wire gauge, or heavier wire fabric, topped by three strands or more of barbed wire or similar material on brackets angled outward between 30° and 45° from the vertical, with an overall height of not less than eight feet, including the barbed topping;

(2) Building walls, ceilings and floors constructed of stone, brick, cinder block, concrete, steel or comparable materials (openings in which are secured by grates, doors, or covers of construction and fastening of sufficient strength such that the integrity of the wall is not lessened by any opening), or walls of similar construction, not part of a building, provided with a barbed topping described in paragraph (f)(1) of this section of a height of not less than 8 feet; or

(3) Any other physical obstruction constructed in a manner and of materials suitable for the purpose for which the obstruction is intended.

(g) "Protected area" means an area encompassed by physical barriers and to which access is controlled.

(h) "Vital area" means any area which contains vital equipment.

(i) "Vital equipment" means any equipment, system, device, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation. Equipment or systems which would be required to function to protect public health and safety following such failure, destruction, or release are also considered to be vital.

(j) "Material access area" means any location which contains special nuclear material, within a vault or a building, the roof, walls, and floor of which each constitute a physical barrier.

(k) "Isolation zone" means any area adjacent to a physical barrier, clear of all objects which could conceal or shield an individual.

(l) "Intrusion alarm" means a tamper indicating electrical, electromechanical, electrooptical, electronic or similar device which will detect intrusion by an individual into a building, protected area, vital area, or material access area, and alert guards or watchmen by means of actuated visible and audible signals.

(m) "Lock" in the case of vaults or vault type rooms means a three-position, manipulation resistant, dial type, built-in combination lock or combination padlock and in the case of fences, walls, and buildings means an integral door lock or padlock which provides protection equivalent to a six-tumbler cylinder lock. "Lock" in the case of a vault or vault type room also means any manipulation resistant, electromechanical device which provides the same function as a built-in combination lock or combination padlock, which can be operated remotely or by the "reading" or insertion of information, which can be uniquely characterized, and which allows operation of the device. "Locked" means protected by an operable lock.

(n) "Vault" means a windowless enclosure with walls, floor, roof and door(s) designed and constructed to delay penetration from forced entry.

(o) "Vault-type room" means a room with one or more doors, all capable of being locked, protected by an intrusion alarm which creates an alarm upon the entry of a person anywhere into the room and upon exit from the room or upon movement of an individual within the room.

(p) "Radiological sabotage" means any deliberate act directed against a plant or transport in which an activity licensed pursuant to the regulations in this chapter is conducted, or against a component of such a plant or transport which could directly or indirectly endanger the public health and safety by exposure to radiation.

(q) "DOE" and "Department of Energy" means the Department of Energy established by the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565, 42 U.S.C. 7101 *et seq.*), to the extent that the Department, or its duly authorized representatives, exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers and components and transferred to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104(b), (c) and (d) of the Energy Reorganization Act of 1974 (Pub. L. 93-438, 88 Stat. 1233 at 1237, 42 U.S.C. 5814) and retransferred to the Secretary of Energy



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(b) *Physical barriers.* (1) The licensee shall locate vital equipment only within a vital area, which, in turn, shall be located within a protected area such that access to vital equipment requires passage through at least two physical barriers. More than one vital area may be within a single protected area.

(2) The licensee shall locate material access areas only within protected areas such that access to the material access area requires passage through at least two physical barriers. More than one material access area may be within a single protected area.

(3) The physical barrier at the perimeter of the protected area shall be separated from any other barrier designated as a physical barrier within the protected area, and the intervening space monitored or periodically checked to detect the presence of persons or vehicles so that the facility security organization can respond to suspicious activity or to the breaching of any physical barrier.

(4) An isolation zone shall be maintained around the physical barrier at the perimeter of the protected area and any part of a building used as part of that physical barrier. The isolation zone shall be monitored to detect the presence of individuals or vehicles within the zone so as to allow response by armed members of the licensee security organization to be initiated at the time of penetration of the protected area. Parking facilities, both for employees and visitors, shall be located outside the isolation zone.

(5) Isolation zones and clear areas between barriers shall be provided with illumination sufficient for the monitoring required by paragraph (b) (3) and (4) of this section, but not less than 0.2 foot candles.

(c) *Access requirements.* The licensee shall control all points of personnel and vehicle access into a protected area, including shipping or receiving areas, and into each vital area. Identification of personnel and vehicles shall be made and authorization shall be checked at such points.

(1) At the point of personnel and vehicle access into a protected area, all individuals, except employees who possess an NRC or United States Department of Energy access authorization and all hand-carried packages shall be

searched for devices such as firearms, explosives, and incendiary devices, or other items which could be used for industrial sabotage. The search shall be conducted either by a physical search or by the use of equipment capable of detecting such devices. Employees who possess an NRC or United States Department of Energy access authorization shall be

searched at random intervals. Subsequent to search, drivers of delivery and service vehicles shall be escorted at all times while within the protected area.

(2) All packages being delivered into the protected area shall be checked for proper identification and authorization. Packages other than hand-carried packages shall be searched at random intervals.

(3) A picture badge identification system shall be used for all individuals who are authorized access to protected areas without escort.

(4) Access to vital areas and material access areas shall be limited to individuals who are authorized access to vital equipment or special nuclear material and who require such access to perform their duties. Authorization for such individuals shall be provided by the issuance of specially coded numbered badges indicating vital areas and material access areas to which access is authorized. Unoccupied vital areas and material access areas shall be protected by an active intrusion alarm system.

(5) Individuals not employed by the licensee shall be escorted by a watchman, or other individual designated by the licensee, while in a protected area and shall be badged to indicate that an escort is required. In addition, each individual not employed by the licensee shall be required to register his name, date, time, purpose of visit, employment affiliation, citizenship, name and badge number of the escort, and name of the individual to be visited. Except for a driver of a delivery or service vehicle, an individual not employed by the licensee who requires frequent and extended access to a protected area or a vital area need not be escorted provided such individual is provided with a picture badge, which he must receive upon entrance into the protected area and which he must return each time he leaves the protected area, which indicates (i) nonemployee-no escort required, (ii) areas to which access is authorized, and (iii) the period for which access has been authorized.

(6) No vehicles used primarily for the conveyance of individuals shall be permitted within a protected area except under emergency conditions.

(7) Keys, locks, combinations, and related equipment shall be controlled to minimize the possibility of compromise and promptly changed whenever there is evidence that they have been compromised. Upon termination of employment of any employee, keys, locks, combinations, and related equipment to which that employee had access shall be changed.

(d) *Detection aids.* (1) All alarms required pursuant to this part shall annunciate in a continuously manned central alarm station located within the protected area and in at least one other continuously manned station, not necessarily within the protected area, such that a single act cannot remove the capability of calling for assistance or otherwise responding to an alarm. All alarms shall be self-checking and tamper indicating. The annunciation of an alarm at the onsite central alarm station shall indicate the type of alarm (e.g., intrusion alarm, emergency exit alarm, etc.) and location. All intrusion alarms, emergency exit alarms, alarm systems, and line supervisory systems shall at minimum meet the performance and reliability levels indicated by GSA Interim Federal Specification W-A-00450 B (GSA-FSS).

(2) All emergency exits in each protected area and each vital area shall be alarmed.

(e) *Communication requirements.* (1) Each guard or watchman on duty shall be capable of maintaining continuous communication with an individual in a

continuously manned central alarm station within the protected area, who shall be capable of calling for assistance from other guards and watchmen and from local law enforcement authorities.

(2) The alarm stations required by paragraph (d) (1) of this section shall have conventional telephone service for communication with the law enforcement authorities as described in paragraph (e) (1) of this section.

(3) To provide the capability of continuous communication, two-way radio voice communication shall be established in addition to conventional telephone service between local law enforcement authorities and the facility and shall terminate at the facility in a continuously manned central alarm station within the protected area.

(4) All communications equipment, including offsite equipment, shall remain operable from independent power sources in the event of loss of primary power.

(f) *Testing and maintenance.* Each licensee shall test and maintain intrusion alarms, emergency alarms, communications equipment, physical barriers, and other security related devices or equipment utilized pursuant to this section as follows:

(1) All alarms, communications equipment, physical barriers, and other security related devices or equipment shall be maintained in operable and effective condition.

(2) Each intrusion alarm shall be functionally tested for operability and required performance at the beginning and end of each interval during which it is used for security, but not less frequently than once every seven (7) days.

(3) Communications equipment shall be tested for operability and performance not less frequently than once at the beginning of each security personnel work shift.

(g) *Response requirement.* (1) The licensee shall have a safeguards contingency plan for dealing with threats, thefts, and industrial sabotage related to the special nuclear material and nuclear facilities subject to the provisions of this section. Safeguards contingency plans shall be in accordance with the criteria in Appendix C of this part, "Licensee Safeguards Contingency Plans."

(2) The licensee shall establish and document liaison with law enforcement authorities.



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(c) Upon detection of abnormal presence or activity of persons or vehicles within an isolation zone, a protected area, a material access area, or a vital area; or upon evidence or indication of intrusion into a protected area, material access area, or vital area, the licensee security organization shall:

(i) Determine whether or not a threat exists,

(ii) Assess the extent of the threat, if any,

(iii) Take immediate concurrent measures to neutralize the threat by:

(A) Requiring responding guards to interpose themselves between material access areas and vital areas and any adversary attempting entry for the purpose of theft of special nuclear material or industrial sabotage and to intercept any person exiting with special nuclear material, and,

(B) Informing local law enforcement agencies of the threat and requesting assistance.

(4) The licensee shall instruct every guard to prevent or impede attempted acts of theft or industrial sabotage by using force sufficient to counter the force directed at him including deadly force when the guard has a reasonable belief it is necessary in self-defense or in the defense of others.

(h) By (120 days after the rule becomes effective) each licensee shall submit a training and qualifications plan outlining the processes by which guards, watchmen, armed response persons and other members of the security organization will be selected, trained, equipped, tested, and qualified to assure these individuals meet the requirements of paragraph (a)(4) of this section. The training and qualifications plan shall include a schedule to show how all security personnel will be qualified by (within 2 years after the rule becomes effective) or within two years after the submitted plan is approved, whichever is later. The training and qualifications plan shall be followed by the licensee after (180 days after the rule becomes effective) or 60 days after the submitted plan is approved by the NRC, whichever is later.

### § 73.55 Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage.

Each licensee who is authorized on February 24, 1977, to operate a nuclear power reactor pursuant to Part 50 of this Chapter shall comply with the requirements of paragraphs (b), (d), (f), (g), and (h) of this section, except for any requirement involving construction and installation of equipment not already in place expressed in paragraphs (d)(1), (d)(7), (d)(8), (f)(3) and (h)(4), by May 25, 1977. The licensee shall submit by May 25, 1977, an amended physical security plan describing how the licensee will comply with all of the requirements of this

section including schedules of implementation. The licensee shall implement his plan and comply with all of the provisions of this section as soon as practicable after NRR approval of his plan but no later than February 23, 1979. Each applicant for a license to operate a nuclear power reactor pursuant to Part 50 of this chapter whose application was submitted prior to February 24, 1977 shall submit by May 25, 1977, an amended physical security plan describing how the applicant plans to comply with the requirements of this section including schedules of implementation. If such applicant receives an operating license after February 24, 1977 he shall comply with the requirements of paragraphs (b), (d), (f), (g), and (h) of this section, except for construction and installation not already in place pursuant to paragraphs (d)(1), (d)(7), (d)(8), (f)(3) and (h)(4) of this section by May 25, 1977, or on the date of receipt of the operating license, whichever is later, and implement his plan and comply with all of the requirements of this section by February 23, 1979 or on the date of receipt of the operating license whichever is later. Each applicant for a license to operate a nuclear power reactor pursuant to Part 50 of this Chapter whose application is submitted after February 24, 1977, shall include in the physical security plan required by § 50.34(c) the information identified in paragraphs (a) through (h) of this section and if such applicant receives an operating license, shall comply with the provisions of this section on receipt of the operating license. Except for individuals for whom the licensee has a well-grounded suspicion that such individuals are carrying firearms, explosives, or incendiary devices, a licensee need not implement the physical search requirement of paragraph (d)(1) of this section for individuals who are regular employees of the licensee at the site at which the licensee is authorized to operate a nuclear power reactor pursuant to Part 50 of this Chapter until 60 days following Commission approval of security plan amendments which define how the final search requirements of paragraph (d)(1) of this section will be met. Until that date the Commission has determined that the search requirement of paragraph (d)(1) of this section, implemented using only equipment capable of detecting firearms, explosives and incendiary devices, satisfies the performance requirements of this section as they apply to searches of regular employees of the licensee at the site entering the protected area of the nuclear power reactor.

### (a) General Performance Objective and Requirements

The licensee shall establish and maintain an onsite physical protection system and security organization which will have as its objective to provide high assurance that activities involving special nuclear material are not inimical to the common defense and security, and do not constitute an unreasonable risk to the public health and safety. The physical protection system shall be designed to protect against the design basis threat of radiological sabotage as stated in § 73.1(a). To achieve this general performance objective, the onsite physical protection system and security organization shall include, but not necessarily be limited to, the capabilities to meet the specific requirements contained in paragraphs (b) through (h) of this section. The Commission may authorize an applicant or licensee to provide measures for protection against radiological sabotage other than those required by this section if the applicant or licensee demonstrates that the measures have the same high assurance objective as specified in this paragraph and that the overall level of system performance provides protection against radiological sabotage equivalent to that which would be provided by paragraphs (b)-(h) of this section and meets the general performance requirements of this section. Specifically, in the special cases of licensed operating reactors with adjacent reactor powerplants under construction, the licensee shall provide and maintain a level of physical protection of the operating reactor against radiological sabotage equivalent to the requirements of this section.

### (b) Physical Security Organization.

(1) The licensee shall establish a security organization, including guards, to protect his facility against radiological sabotage. If a contract guard force is utilized for site security, the licensee's written agreement with the contractor will clearly show that (i) the licensee is responsible to the Commission for maintaining safeguards in accordance with Commission regulations and the licensee's security plan, (ii) the NRC may inspect, copy, and take away copies of all reports and documents required to be kept by Commission regulations, orders, or applicable license conditions whether such reports and documents are kept by the licensee or the contractor, (iii) the requirement in § 73.55(b)(4) of this section that the licensee demonstrate the ability of physical security personnel to perform their assigned duties and

## PART 73 • PHYSICAL PROTECTION OF PLANTS AND MATERIALS

responsibilities, includes demonstration of the ability of the contractor's physical security personnel to perform their assigned duties and responsibilities in carrying out the provisions of the Security Plan and these regulations, and (iv) the contractor will not assign any personnel to the site who have not first been made aware of these responsibilities.

(2) At least one full time member of the security organization who has the authority to direct the physical protection activities of the security organization shall be onsite at all times.

(3) The licensee shall have a management system to provide for the development, revision, implementation, and enforcement of security procedures. The system shall include:

(i) Written security procedures which document the structure of the security organization and which detail the duties of guards, watchmen and other individuals responsible for security; and

(ii) Provision for written approval of such procedures and any revisions thereto by the individual with overall responsibility for the security functions.

(4) The licensee shall not permit an individual to act as a guard, watchman or armed response person, or other member of the security organization unless such individual has been trained, equipped, and qualified to perform each assigned security job duty in accordance with Appendix B, of this part "General Criteria for Security Personnel." Upon the request of an authorized representative of the Commission the licensee shall demonstrate the ability of the physical security personnel to carry out their assigned duties and responsibilities. Each guard, watchman, armed response person, and other member of the security organization shall requalify in accordance with Appendix B of this part at least every 12 months. Such requalification shall be documented. By (300 days after the rule becomes effective) each licensee shall submit a training and qualifications plan outlining the processes by which guards, watchmen, armed response persons, and other members of the security organization will be selected, trained, equipped, tested, and qualified to assure that these individuals meet the requirements of this paragraph. The training and qualifications plan shall include a schedule to show how all security personnel will be qualified by (within two years after the rule becomes effective) or within two years after the submitted plan is approved, whichever is later. The training and qualifications plan shall be followed by the licensee after (500 days after the rule becomes effective) or 60 days after the submitted plan is approved by the NRC, whichever is later.

(c) *Physical barriers.* (1) The licensee shall locate vital equipment only within a vital area, which in turn, shall be located within a protected area such that access to vital equipment requires passage through at least two physical barriers of sufficient strength to meet the performance requirements of paragraph (a) of this section. More than one vital area may be located within a single protected area.

(2) The physical barriers at the perimeter of the protected area shall be separated from any other barrier designated as a physical barrier for a vital area within the protected area.

(3) Isolation zones shall be maintained in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and shall be of sufficient size to permit observation of the activities of people on either side of that barrier in the event of its penetration. If parking facilities are provided for employees or visitors, they shall be located outside the isolation zone and exterior to the protected area barrier.

(4) Detection of penetration or attempted penetration of the protected area or the isolation zone adjacent to the protected area barrier shall assure that adequate response by the security organization can be initiated. All exterior areas within the protected area shall be periodically checked to detect the presence of unauthorized persons, vehicles, or materials.

(5) Isolation zones and all exterior areas within the protected area shall be provided with illumination sufficient for the monitoring and observation requirements of paragraphs (c) (3), (c) (4), and (h) (4) of this section, but not less than 0.2 footcandle measured horizontally at ground level.

(6) The walls, doors, ceiling, floor, and any windows in the walls and in the doors of the reactor control room shall be bullet-resisting.

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(d) *Access requirements.* (1) The licensee shall control all points of personnel and vehicle access into a protected area. Identification and search of all individuals shall be made and authorization shall be checked at such points. The search function for detection of firearms, explosives, and incendiary devices shall be conducted either by a physical search or by use of equipment capable of detecting such devices. The individual responsible for the last access control function (controlling admission to the protected area) shall be isolated within a bullet-resisting structure as described in paragraph (c) (6) of this section to assure their ability to respond or to summon assistance.

(2) At the point of personnel and vehicle access into a protected area, all hand-carried packages shall be searched for devices such as firearms, explosives, and incendiary devices, or other items which could be used for industrial sabotage.

(3) All packages and material for delivery into the protected area shall be checked for proper identification and authorization and searched for devices such as firearms, explosives and incendiary devices or other items which could be used for industrial sabotage, prior to admittance into the protected area, except those Commission approved delivery and inspection activities specifically designated by the licensee to be carried out within vital or protected areas for reasons of safety, security or operational necessity.

(4) All vehicles, except under emergency conditions, shall be searched for items which could be used for sabotage purposes prior to entry into the protected area. Vehicle areas to be searched shall include the cab, engine compartment, undercarriage, and cargo area. All vehicles, except designated licensee vehicles, requiring entry into the protected area shall be escorted by a member of the security organization while within the protected area and, to the extent practicable, shall be off loaded in the protected area at a specific designated materials receiving area that is not adjacent to a vital area. Designated licensee vehicles shall be limited in their use to onsite plant functions and shall remain in the protected area except for operational, maintenance, repair security and emergency purposes. The licensee shall exercise positive control over all such designated vehicles to assure that they are used only by authorized persons and for authorized purposes.

(5) A numbered picture badge identification system shall be used for all individuals who are authorized access to protected areas without escort. An individual not employed by the licensee but who requires frequent and extended access to protected and vital areas may be authorized access to such areas without escort provided that he receives a picture badge upon entrance into the protected area which must be returned upon exit from the protected area and which indicates (i) Non-employee-no escort required; (ii) areas to which ac-

cess is authorized and (iii) the period for which access has been authorized. Badges shall be displayed by all individuals while inside the protected area.

(6) Individuals not authorized by the licensee to enter protected areas without escort shall be escorted by a watchman, or other individual designated by the licensee, while in a protected area and shall be badged to indicate that an escort is required. In addition, each such individual shall be required to register his name, date, time, purpose of visit and employment affiliation, citizenship, and name of the individual to be visited.

(7) The licensee shall positively control all points of personnel and vehicle access into vital areas. Access to vital areas shall be limited to individuals who are authorized access to vital equipment and who require such access to perform their duties. Authorization for such individuals shall be provided by the issuance of specially coded numbered badges indicating vital areas to which access is authorized. Access to vital areas for the purpose of general familiarization and other non-work-related activities shall not be authorized except for good cause shown to the licensee. Unoccupied vital areas shall be locked and protected by an active intrusion alarm system.

(8) Access to the reactor containment shall be through doors or hatches which shall be alarmed and have locks of substantial construction to offer penetration resistance and impede both surreptitious and forced entry. Any time frequent access is permitted to containment such as during refueling or major maintenance, positive access control to assure that only authorized personnel and materials are permitted into the containment shall be exercised by the licensee, with a guard or watchman.

(9) All keys, locks, combinations, and related equipment used to control access to protected and vital areas shall be controlled to reduce the probability of compromise. Whenever there is evidence that any key, lock, combination, or related equipment may have been compromised it shall be changed. Upon termination of employment of any employee, keys, locks, combinations, and related equipment to which that employee had access, shall be changed.

(e) *Detection aids.* (1) All alarms required pursuant to this part shall annunciate in a continuously manned central alarm station located within the protected area and in at least one other continuously manned station, not necessarily onsite, such that a single act cannot remove the capability of calling for assistance or otherwise responding to an alarm. The onsite central alarm station shall be considered a vital area and its walls, doors, ceiling, floor, and any windows in the walls and in the doors shall be bullet-resisting. The onsite central alarm station shall be located within a building such that the interior of the central alarm station is not visible from the perimeter of the protected area. This station shall not contain any operational activities that would interfere with the execution of the alarm response function.

(2) All alarm devices including transmission lines to annunciators shall be tamper indicating and self-checking e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when the system is on standby power. The annunciation of an alarm at the alarm stations shall indicate the type of alarm (e.g., intrusion alarm, emergency exit alarm, etc.) and location.

(3) All emergency exits in each protected area and each vital area shall be alarmed.

(f) *Communication requirements.* (1) Each guard, watchman or armed response individual on duty shall be capable of maintaining continuous communication with an individual in each continuously manned alarm station required by paragraph (e) (1) of this section, who shall be capable of calling for assistance from other guards, watchmen, and armed response personnel and from local law enforcement authorities.

(2) The alarm stations required by paragraph (e) (1) of this section shall have conventional telephone service for communication with the law enforcement authorities as described in paragraph (f) (1) of this section.

(3) To provide the capability of continuous communication, radio or microwave transmitted two-way voice communication, either directly or through an intermediary, shall be established, in addition to conventional telephone service, between local law enforcement authorities and the facility and shall terminate in each continuously manned alarm station required by paragraph (e) (1) of this section.

(4) Non-portable communications equipment controlled by the licensee and required by this section shall remain operable from independent power sources in the event of the loss of normal power.

(g) *Testing and maintenance.* Each licensee shall test and maintain intrusion alarms, emergency alarms, communications equipment, physical barriers, and other security related devices or equipment utilized pursuant to this section as follows:

(1) All alarms, communication equipment, physical barriers, and other security related devices or equipment shall be maintained in operable condition. The licensee shall develop and employ compensatory measures including equipment, additional security personnel and specific procedures to assure that the effectiveness of the security system is not reduced by failure or other contingencies affecting the operation of the security related equipment or structures.

(2) Each intrusion alarm shall be tested for performance at the beginning and end of any period that it is used for security. If the period of continuous use is longer than seven days, the intrusion alarm shall also be tested at least once every seven (7) days.

(3) Communications equipment required for communications onsite shall be tested for performance not less frequently than once every seven (7) days.

42 FR 10836

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(d) \* \* \*

(7) The licensee shall positively control all points of personnel and vehicle access into vital areas. Access to vital areas shall be limited to individuals with access authorization and with a need to enter the vital area based upon assigned duties requiring the performance of tasks in the vital area. Unoccupied vital areas shall be locked and protected by an active intrusion alarm system. The access authorization system shall incorporate the following procedures:

(i) Access lists shall be established and approved for each vital area by the onsite individual responsible for security (or equivalent) or his designated representative. Approved access areas and the duration of access shall be commensurate with the tasks to be performed. To remove the names of individuals who no longer have a need for access, access lists shall be reviewed, updated and reapproved at the end of each access duration period not to exceed 31 days.

(ii) Each individual granted access to vital areas shall be issued a serially numbered badge that displays a visible code which indicates the level of access granted corresponding to the associated types of vital areas designated in the security plan.

(iii) Emergency access lists shall be established and approved for each vital area by the onsite individual responsible for security (or equivalent) or his designated representative. Access controls and written procedures to cope with emergency conditions shall be established.

(iv) Licensee procedures and/or equipment shall be established to assure that only the authorized individual can gain unescorted entry to a vital area on his/her key, key card, or other entry mechanism.

(g) *Testing and maintenance.* Each licensee shall test and maintain intrusion alarms, emergency alarms, access control equipment, communications equipment, physical barriers, and all other security-related devices or equipment utilized pursuant to this section, as follows:

### 10 CFR Part 73

#### Searches of Individuals at Power Reactor Facilities

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The Nuclear Regulatory Commission proposes to amend its regulations to clarify requirements for searches of individuals at power reactor facilities protected area entry portals. The amendment would require searches similar to those used on an interim basis at power reactors prior to November 1, 1980, including mandatory use of search equipment, and the pat-down search of visitors to nuclear power plants.

**DATES:** Comments must be received by January 15, 1981.

**ADDRESSES:** Comments should be sent to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Attention: Docketing and Service Branch. Copies of comments received may be examined at the Commission's Public Document Room at 1717 H Street, N.W., Washington, D.C.

**FOR FURTHER INFORMATION CONTACT:** L. J. Evans, Jr., Chief, Regulatory Improvements Branch, Division of Safeguards, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, (301) 427-4181.

**SUPPLEMENTARY INFORMATION:** The Commission proposes to amend § 73.55 to adopt final requirements for searches of individuals at power reactor protected area entry portals.

Since April of 1977, power reactor licensees have generally conformed to interim search procedures which were developed as an alternative to routine 100% pat-down search of all employees. The Commission has deferred implementation of routine pat-down searches of employees, and certain other measures pending its decision on a program to help assure the trustworthiness of individuals at nuclear power plants and the evaluation of possible alternative measures (see 44 FR 65969). The Commission has since directed that an industry administered pre-employment screening program be developed along the lines recommended by the Hearing Board in the Clearance Rule proceeding.

The Commission's goal in this regard is to increase the assurance that power reactors are adequately protected against sabotage by an insider. Based on the fact that a screening program is under development, and its experience with the interim search procedures, the Commission is now prepared to adopt final search procedures for power reactor facilities. The Commission has decided that mandatory equipment-oriented searches augmented by pat-down searches under certain conditions, are an acceptable alternative to routine pat-down searches of all employees. The Commission has also decided to eliminate the term "well-grounded" (now found in 10 CFR 73.55) when referring to the suspicion a licensee must have before performing a pat-down search on a suspect individual. Because of the vagueness of the term it has been found to be impracticable to implement that aspect of the search requirement on a day to day basis. The Commission is also issuing an immediately effective extension to the current relief from pat-down searches in § 73.55 until 60 days after approval of security plan amendments that define how the final search requirements will be met, in order to accommodate the rulemaking procedure for this proposed amendment.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Section 553 of Title 5 of the United States Code, notice is hereby given that adoption of the following amendments to Title 10, Chapter 1, Code of Federal Regulations, Part 73, is contemplated.

### PART 73—PHYSICAL PROTECTION OF PLANTS AND MATERIALS

1. Section 73.55(d)(1) is revised to read as follows:

#### § 73.55 [Amended]

(d)(1) Access requirements. The licensee shall control all points of personnel and vehicle access into a protected area to ensure that only authorized individuals, vehicles, and materials enter. Identification and search of all individuals must be made and authorization must be checked at those points. Except as otherwise provided in this paragraph, the search function for detection of firearms, explosives, and incendiary devices is to be accomplished through the use of both firearms and explosive detection equipment capable of detecting those devices. In addition to the searches set forth above, the licensee shall conduct a physical pat-down search of all visitors who require access to the protected



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area. When the licensee has cause to suspect that an individual is attempting to introduce firearms, explosives, or incendiary devices into the protected area, the licensee shall conduct a physical pat-down search on that individual. Whenever firearms or explosive detection equipment is out of service or not operating satisfactorily, the licensee shall conduct a physical pat-down search of all persons who have not been properly searched by that equipment prior to their entry into the protected area. The individual responsible for the last access control function (controlling admission to the protected area) shall be isolated within a bullet-resisting structure as described in paragraph (c)(8) of this section to assure that individual's ability to respond or to summon assistance. By (45 days from the effect date of this amendment), each licensee shall submit proposed amendments to his security plan which define how the amended search requirements of this paragraph will be met. The amended search requirements of this paragraph are to be implemented by the licensee within 60 days after Commission approval of the proposed security plan amendments.

➤ 45 FR 81060  
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### 10 CFR Part 73

#### Advance Notification to Governors Concerning Shipments of Irradiated Reactor Fuel

AGENCY: Nuclear Regulatory Commission:

ACTION: Proposed rule.

**SUMMARY:** The NRC is required by Federal statute to issue regulations which provide for the timely advance notification to the governor of any state prior to the transport of nuclear waste, including irradiated reactor fuel, within or through the state. This notification will provide governors advance information, not otherwise available to them, related to nuclear waste transportation in their states. To carry out the notification for irradiated reactor fuel, the Commission proposes to amend its regulations in 10 CFR Part 73. The Commission is issuing a separate notice of proposed rulemaking elsewhere in this edition of the Federal Register with regard to the required notification for other kinds of nuclear waste.

**DATE:** Comments due on or before March 9, 1981.

**ADDRESSES:** Written comments or suggestions for consideration in connection with the proposed amendments should be sent to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. Attention: Docketing and Service Branch. Copies of comments received may be examined at the Commission's Public Document Room at 1717 H Street, NW, Washington, D.C. 20555.

#### FOR FURTHER INFORMATION CONTACT:

L. J. Evans, Jr., Chief, Regulatory Improvement Branch, Division of Safeguards, Office of Nuclear Material Safety and Safeguards. (301) 427-4181.

#### SUPPLEMENTARY INFORMATION:

##### Background

Section 301 of Pub. L. 96-295 requires the Nuclear Regulatory Commission to promulgate regulations for timely notification to the governor of any state, prior to the transport of nuclear waste, including spent nuclear fuel, to, through, or across the boundaries of the state. Due to information protection considerations, the notification requirements for spent fuel shipments will likely be different from the notification requirements for other forms of nuclear waste. Accordingly, the Commission proposes to amend 10 CFR Part 73 to implement notification for spent fuel shipments and 10 CFR Part 71 to implement notification for other forms of radioactive waste. The Part 71 proposed amendment is set forth elsewhere in this issue of the Federal Register.

##### Discussion of Proposed Rule

*A. Synopsis of the proposed action.* The proposed rule calls for the following:

1. The governor will be notified four days before entry of a shipment into a state.
2. The information to be supplied will be similar to that supplied for other shipments of radioactive waste, namely:
  - i. The shipment route.
  - ii. Estimated date and time of departure from point of origin.
  - iii. Estimated date and time of arrival at state boundary.
  - iv. Identification of shipper, carrier, and receiver, and
  - v. Description of the shipment as specified by the Department of Transportation in 49 CFR 172.202 and 172.203(d).
3. The governor will ensure that schedule information is appropriately protected from unauthorized disclosure; other information need not be protected.
4. The information protection measures are to be patterned after those for National Security Information—Confidential Level and in accordance with measures in the proposed 10 CFR

73.21, which is being issued separately.

5. The schedule information is to be automatically downgraded a short time after the shipment so that protection of the information need not be continued.

6. The licensee will renotify the office of the governor in the event of schedule changes in excess of six hours.

From the outset of its program for the protection of spent fuel shipments, the NRC has held that knowledge of the schedule of a shipment would be of significant value to an adversary planning to sabotage the shipment. Consistent with that longstanding policy, the proposed regulation provides for protection of schedule information pursuant to newly enacted § 147 of the Atomic Energy Act (section 207, Public Law 96-295 94 Stat. 780). Accordingly, the Commission has determined that the unauthorized disclosure of the kinds of information required by § 73.37(f)(3) could reasonably be expected to have a significant adverse effect on the health and safety of the public or the common defense and security by significantly increasing the likelihood of theft, diversion, or sabotage of irradiated nuclear reactor fuel.

The Commission's staff is preparing to make available to the public an atlas of spent fuel shipment routes that have been approved by the NRC. A copy will be provided to each governor. The atlas will be updated from time to time. Copies of this document, designated NUREG 0725, are or soon will be available from GPO Sales Program, Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

It is possible that some governors might prefer not to receive notifications. The staff proposes that no governor should be forced to receive and protect unwanted information. Accordingly, in response to a request from a governor, the staff will remove that governor's name from the list of governors to be notified.

##### *B. Overview of proposed notification and information protection processes.*

Before any transport of spent fuel subject to the nondisclosure requirement of § 147 is made, governors or their designees will be informed by the NRC of the applicable information protection provisions of a new proposed 10 CFR 73.21 now under consideration by the Commission. The Commission anticipates that § 73.21 will be promulgated as a final rule concurrently with promulgation in final form of the amendments to § 73.37 proposed herein. In the event that promulgation of § 73.21 is delayed beyond the effective date of § 73.37, the Commission will provide in § 73.37 itself or by whatever other means are appropriate for protection of sensitive safeguards information as authorized by § 147 of the Atomic Energy Act. It is anticipated that the

## PART 73 • PROPOSED RULE MAKING

interim protection will be substantially as provided by proposed § 73.21. The significant provisions of proposed § 73.21 and related law applicable to state employees would generally be as follows: (1) State employees who receive, produce, or acquire schedule information are to protect it against unauthorized disclosure. (2) Only those persons authorized by the governor or his designee or otherwise authorized by § 73.21 are to be allowed access to schedule information. (3) When not in use, written schedule information is to be stored in a security container within a building. A container such as a safe or bank safe deposit box is acceptable. Only authorized persons are to be allowed access to the content of the security container. (4) Schedule information is not to be discussed by telephone except in an emergency or under extraordinary conditions. However, relative schedule information, such as the number of hours of delay resulting from a schedule change may be transmitted by telephone (or other means). (5) Written schedule information may be destroyed by burning, pulping, or other positive method. (6) Written schedule information may be reproduced but only to the extent needed to carry out the state's official business. (7) Newly enacted § 147 of the Atomic Energy Act provides that a civil penalty can be assessed against a person who discloses schedule information without proper authorization or who fails to carry out the information protection requirements.

(The above requirements will be published in the Federal Register separately for public comment on their own merits. They are described here so that members of the public may comment more effectively on the proposed amendments to 10 CFR 73.37.)

Once the information protection arrangements are established within a state, a typical notification could be carried out as follows. Notification would be made to the governor shortly before the shipment is to be made. The notification would be by letter, with a "protected" enclosure. All information not protected under the provisions of § 147 would be set forth in the body of the letter. The body of the letter would also contain a paragraph stating that the enclosure is protected from disclosure by law and that there is substantial civil penalty for unauthorized disclosure. The protected enclosure would be contained in a separate, sealed envelope appropriately identified. This practice would permit the basic letter to be opened by persons outside of the authorized chain of individuals who would need to know the protected information, without violation of § 147 and implementing regulations. The letter with its unopened "protected" enclosure could then be passed on to those

persons authorized to receive it.

A volume of protected information would likely accumulate in the absence of an information downgrading system. Downgrading of schedule information appears to be justified because the value of the information to an adversary declines after a shipment or series of shipments is completed. The NRC therefore proposes requirements that automatically downgrade schedule information 10 days after a one-of-a-kind shipment departs a state or 10 days after the last shipment of a series of related shipments departs the state. Downgraded schedule information need not be protected.

### Proposed Rule

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that adoption of the following amendments to 10 CFR Part 73 is contemplated.

Section 73.37 is amended by adding paragraphs (f) and (g) to read as follows:

§ 73.37 Requirements for physical protection of irradiated reactor fuel in transit.

(f) Prior to the transport of spent fuel within or through a state a licensee subject to this section shall notify the governor. The licensee shall comply with the following criteria in regard to a notification:

(1) The notification must be in writing and sent to the office of each appropriate governor. A notification delivered by mail must be postmarked at least 7 days before transport of a shipment within or through the state. A notification delivered by messenger must reach the office of the governor at least 4 days before transport of a shipment within or through the state. A list of the mailing addresses of governors is available upon request from the Director, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

(2) The notification must include the following information:

- (i) A listing of the routes to be used within or through the state.
- (ii) Identification of the shipper, the receiver, and the carrier(s).
- (iii) A description of the shipment as specified by the Department of Transportation in 49 CFR 172.202 and 172.203(d).
- (iv) A statement that the information described below in § 73.37(f)(3) is required by NRC regulation to be protected in accordance with the requirements of § 73.21.

(3) The licensee shall provide the following information on a separate enclosure to the written notification:

- (i) The estimated date and time of departure from the point of origin of the

shipment.

(ii) The estimated date and time of entry into the governor's state.

(iii) For the case of a single shipment whose schedule is not related to the schedule of any subsequent shipment, a statement that schedule information must be protected in accordance with the provisions of § 73.21 until at least 10 days after the shipment has departed the state.

(iv) For the case of a shipment in a series of shipments whose schedules are related, a statement that schedule information must be protected in accordance with the provisions of § 73.21 until 10 days after the last shipment in the series has departed the state and an estimate of the date on which the last shipment in the series will enter the state.

(4) A licensee shall notify a responsible individual in the office of the governor of any schedule change that differs by more than 6 hours from the schedule information previously furnished to a governor in accordance with § 73.37(f)(3), and shall inform that individual of the number of hours of advance or delay relative to the written schedule information previously furnished.

(g) State officials, state employees, and other individuals, whether or not licensees of the Commission, who receive schedule information of the kind specified in § 73.37(f)(3) shall protect that information against unauthorized disclosure as specified in § 73.21.



UNITED STATES NUCLEAR REGULATORY COMMISSION  
RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

**PART  
100**

**REACTOR SITE CRITERIA**

**PROPOSED RULE MAKING**

43 FR 2729

Published 1/19/78

Comment period expires 3/1/78

[10 CFR Part 100]

**SEISMIC AND GEOLOGIC SITING CRITERIA FOR  
NUCLEAR POWER PLANTS**

*Reassessment of Current Criteria*

On November 13, 1973, the Atomic Energy Commission published in the **FEDERAL REGISTER** (38 FR 1271) amendments to its regulations which adopted Appendix A, "Seismic and Geologic Siting Criteria for Nuclear Power Plants," to 10 CFR Part 100, "Reactor Site Criteria," as a rule to be effective December 13, 1973. In view of the experience gained in the application of the procedures and methods set forth therein, the difficulties encountered, and the rapid advancement in the state-of-the-art of earth sciences, the staff of the Offices of Standards Development and Nuclear Reactor Regulation of the U.S. Nuclear Regulatory Commission have initiated a reassessment of the appendix to determine the need for its revision.

To aid the staff in this reassessment, all interested persons are invited to submit information, comments, and suggestions. The staff is particularly interested in finding out about problems that have arisen in the application of Appendix A. Commenters are invited to state the nature of the problems encountered and describe them in detail. Corrective actions should also be recommended.

After comments, information, and suggestions have been received and considered, the staff will publish the results of its reassessment as a preliminary value/impact statement and, if appropriate, recommend to the Commission that rulemaking be initiated.

Interested persons should send information, comments, and suggestions by March 1, 1978 to Mr. Leon L. Beratan, Chief, Site Safety Standards Branch, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Copies of the comments received will

be available for examination in the NRC Public Document Room, 1717 H Street NW., Washington, D.C.

45 FR 50350

Published 7/29/80

Comment period expires 9/29/80

*Modification of the Policy and  
Regulatory Practice Governing  
the Siting of Nuclear Power Reactors*

See Part 50 Proposed Rule Making

➤ 45 FR 79820

Published 12/2/80

Comment period expires 1/16/81

*Environmental Impact Statement for  
Reactor Siting Criteria*

See Part 50





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kind of behavior should lead to a more accurate public perception of the true incidence of risk from nuclear power facilities and a more practical and considered response to an emergency when one occurs. No change has been made in the final Environmental Assessment.

8. *Five commenters assert that the use of the mix of fuels already in use in the State is a poor predictor of what would be the fuel replacement capacity for a specific plant shutdown.*

A generic assessment must make some averaging assumptions or become hopelessly lost in detail. In this case, the commenters are correct that this is a "gross assumption." It is, however, sufficient to establish the range of costs for replacement power, which is the way the detailed information was used. No change has been made in the mix of fuels used to generically assess the range of costs of replacement power.

9. *Five commenters observe that all of the significant impacts are due to linkage between adequacy of emergency plans and continued plant operation.*

These commenters agree that the impacts of compliance are insignificant and that if there were no penalty associated with inadequate emergency preparedness then an Environmental Assessment or no Environmental Assessment would be appropriate. The thrust of the rule is to protect the public through adequate emergency planning. The thrust of the shutdown provision is to protect the public in the event that adequate provision has not been and is not being made to provide adequate emergency planning and preparedness.

The decision of how the public should be protected has been made, i.e., either emergency planning and preparedness is adequate or a plant may be placed in a condition of safe shutdown. The State and local authorities have the responsibility to determine which option is in the best interest of their citizens. The linkage remains in the effective rule changes. No additional discussion has been provided in the final Environmental Assessment.

10. *Two commenters observed that the proposed rule was issued prior to the expanded role of FEMA in emergency planning for nuclear power plants.*

The NRC and FEMA are working closely to establish and carry out their respective roles in emergency planning for nuclear power plants. The effective rule has been changed to reflect this change in relationship between the two agencies. However, the substantive provisions of the rule have not changed, only the parties responsible for specific actions.

11. *Seven commenters assert that the costs of implementation are too low and that there may not be enough time allowed to achieve adequacy in all areas of emergency planning and preparedness.*

The draft Environmental Assessment based its estimates of cost of implementation on information contained in "Beyond Defense in Depth: Cost and Funding of State and Local Government Radiological Emergency Response Plans and Preparedness in Support of Commercial Nuclear Power Stations," NUREG-0553, October 1979. This report did not consider the costs of a warning system that would effectively warn everyone within 10 miles within 15 minutes of the time when the decision to warn the public is made. The cost estimates in the draft Environmental Assessment thus do not include the costs of 15-minute notification. The estimates provided by the commenters have been used to revise the cost estimate in the final Environmental Assessment. It should be noted that all cost figures are approximate and are only intended to give an estimate of the normal magnitude of costs and fees associated with building and operating a nuclear power plant. Significant variations from these costs for individual cases should be expected.\* These changes do not affect the earlier conclusions of the draft Environmental Assessment.

In response to comments that more time might be needed, the deadline for plans and implementation to be completed has been extended to April 1, 1981, and the deadline for installation of warning systems has been extended to July 1, 1981 to allow for procurement problems. Appropriate changes have been made in the Environmental Assessment but the earlier conclusions remain unaffected.

12. *One commenter suggested that decisions on shutdowns, allowing continued operation despite inadequate plans, or the resumption of operation after a shutdown should be listed in 10 CFR Part 51 as a categorical exclusion.*

The categorical exclusions in Part 51 are those Commission actions that have been judged as a class not to have any significant environmental impact and thus have been excluded from further consideration under those portions of the Commission's regulations that

\* Northeast Utilities indicated costs as much as 2.5 times those quoted in the Environmental Assessment but also cited unusual complications such as large numbers of local governments that escalated their costs. Since this single estimate was not confirmed by other State or utility commenters, the values were considered beyond the usual range of costs.

implement the National Environmental Policy Act of 1969. The Commission will consider this as a comment on the ongoing rulemaking on 10 CFR Part 51 (45 FR 13739).

13. *Two commenters noted that no consideration was given to the costs to the utilities of those portions of the rule changes that upgrade previous onsite requirements.*

This oversight has been corrected. While these costs added a significant increment to the total cost of implementation, this total cost is still low compared to the reference costs of (1) replacement power, (2) tax and fee burden, and (3) capital investment. While several of the cost figures in the final Environmental Assessment have been revised upward, the comparison of these costs has remained unchanged and the conclusions of the Environmental Assessment are unchanged.

14. *One commenter observed that there is no consideration given to plants under construction.*

The cost estimates were forecast for all plants scheduled to be operating by the time the rule was to become effective. To go beyond this period would only complicate the estimates with future costs of greater uncertainty. The purpose here was to present an approximation of the relative significance of the cost impacts to determine whether a more detailed analysis is necessary. The relative magnitude of these costs is well established by the information at hand and these are clearly sufficient to support a decision without the preparation on environmental impact statement.

Dated at Bethesda, Maryland, this 6th day of August 1980.

For the Nuclear Regulatory Commission,  
**Robert B. Minogue,**  
Director, Office of Standards Development,  
U.S. Nuclear Regulatory Commission.

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45 FR 58688  
Published 9/4/80

### FEDERAL EMERGENCY MANAGEMENT AGENCY

**State Workshop for Review of Proposed "Final Issue of Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (NUREG-0654/FEMA-REP-1)**

**AGENCY:** Federal Emergency Management Agency (FEMA).

**ACTION:** Announcement.

FEMA is cooperating with the Nuclear Regulatory Commission in development of final criteria to be used in the preparation and evaluation of radiological emergency response plans and preparedness in support of nuclear power plants (NUREG-0654/FEMA-REP-1 issued for interim use and comment in January 1980). In conjunction with this, FEMA also has proposed on June 24, 1980, a rule, 44 CFR Part 350 (45 FR 42341) which will govern the FEMA approval of State and local radiological emergency plans and preparedness. These and other actions will provide guidance to govern the acceptability of planning and preparedness around commercial nuclear facilities.

Since being published for comment, the joint FEMA/NRC criteria has been commented upon by States, local governments, and the public. In response to these comments, and to information gained during the interim use period of the criteria, a number of modifications to the criteria are proposed.

FEMA, in cooperation with NRC, will hold a State workshop to discuss the criteria, after which it will be issued in final form. This workshop is being held to obtain the views of, and provide the opportunity for discussion among State officials; however, all sessions will be open to public attendance and observation on a space available basis. Information will also be provided about FEMA rulemaking.

The meeting will be held at the Sheraton Airport Hotel, Atlanta, Georgia, September 24, 25, and 26, commencing at 1:00 pm September 24, 1980.

Persons who wish further information about this workshop or who wish to observe should write Ms. Karol Bothamley, Southern States Energy Board, One Exchange Place, 2300 Peachford Road, Suite 1230, Atlanta, Georgia 30338; telephone (404) 455-8841.

Dated at Washington, D.C. this twenty-eight day of August, 1980.

For the Federal Emergency Management Agency.

Robert T. Jaska,  
*Acting Director, Radiological Emergency Preparedness Division.*

45 FR 61796

Published 9/17/80

### INTERAGENCY WORKING GROUP ON A HAZARDOUS SUBSTANCES EXPORT POLICY

#### Draft Report; Extension of Comment Period

**AGENCY:** Interagency Working Group on a Hazardous Substances Export Policy.

**ACTION:** Extension of comment.

**SUMMARY:** The agency is extending its comment period on the draft report of the Interagency Working Group on a Hazardous Substances Export Policy which was previously published in the Federal Register of August 12, 1980 (45 FR 53754). This action is taken in response to public interest expressed in the matter and requests for an extended comment period.

**DATE:** Comments now due on or before October 13, 1980.

**ADDRESS:** Send comments to the Interagency Working Group on a Hazardous Substances Export Policy, c/o Esther Peterson, Special Assistant to the President for Consumer Affairs, 495 Old Executive Office Building, Washington, D.C. 20500.

#### FOR FURTHER INFORMATION CONTACT:

Ed Cohen or Mark Goldberg at the Office of Consumer Affairs, at 202/456-6226 or Kitty Gilman or Jean Halloran of the Council on Environmental Quality at 202/395-5780.

Esther Peterson,

*Special Assistant to the President for Consumer Affairs and Chair Interagency Working Group on a Hazardous Substances Export Policy.*

45 FR 80843  
Published 12/8/80  
Comment period expires 3/13/80

### Research and Special Programs Administration

#### 49 CFR Part 172

(Docket No. HM-168F; Advance Notice)

#### Limited Quantities of Radioactive Materials

**AGENCY:** Materials Transportation Bureau, Research and Special Programs Administration, DOT.

**ACTION:** Advance notice of proposed rulemaking (ANPRM).

**SUMMARY:** This ANPRM provides information and an opportunity for comment on the need for, or possible elimination of, certain regulatory requirements applicable to the transportation of radioactive materials in limited quantities.

**DATE:** Comments must be received on or before March 13, 1980.

**ADDRESS COMMENTS TO:** Dockets Branch, Materials Transportation Bureau, U.S. Department of Transportation, Washington, D.C. 20590 (202-426-3146). Comments should identify the docket and be submitted, if possible, in five copies. The Dockets Branch is located in Room 8426 of the Nassif Building, 400 Seventh Street, S.W., Washington, D.C. 20590. Office hours are 8:30 a.m. to 3:00 p.m., Monday thru Friday.

**FOR FURTHER INFORMATION CONTACT:** Richard R. Rawl, Office of Hazardous Materials Regulation, Materials Transportation Bureau, Department of Transportation, 400 Seventh Street, S.W., Washington, D.C. 20590 (202-426-2311).

#### SUPPLEMENTARY INFORMATION

##### 1. Background of Regulations

Ever since the general consolidation of the Hazardous Materials Regulations (HMR) was accomplished under Docket HM-103/112 (41 FR 14972, April 15, 1976), an inconsistency has existed between the regulations applicable to aircraft and those applicable to the other modes insofar as they pertain to limited quantities of radioactive materials and radioactive devices. As that consolidation was a major revision of the HMR wherein the requirements for carriers by aircraft and vessel were

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included in the comprehensive set of regulations already applicable to carriers by rail and public highway, it was not possible to resolve all of the philosophical differences represented by the various modes. For the sake of expediency, it was determined that the general implementation of the consolidated HMR should not be unnecessarily delayed by varying requirements which reflect the legitimate differences professed by the modal administrations regarding an acceptable level of safety. A thoughtful consideration of issues such as the topic at hand was judged to be a more prudent course and is expected to result in regulations that assure a proper degree of protection for public health and safety without unduly burdening shippers or carriers.

At the present time all packages containing limited quantities of radioactive materials or radioactive devices transported by any mode are excepted from specification packaging, marking, and labeling, and are further excepted from the provisions of § 173.393 pertaining to general packaging and shipping requirements applicable to other radioactive materials. These exceptions are consistent with those provided for limited quantities of hazardous materials belonging to most other hazard classes based upon the limited consequences that could be expected when they are involved in incidents. Hazard classes which do not provide exceptions based upon a limited quantity include those belonging to the explosives group and poison A materials. While the exception from package marking does not apply to most other hazard classes, it should be noted that in the case of dispersible radioactive materials the outside of the inner container must bear the marking "Radioactive."

Analysis of the limited quantity exceptions for radioactive materials as they apply to each of the modes reveals the following differences in regulatory control:

**Rail:** (a) A carrier may not accept for transportation a package containing a limited quantity of radioactive materials unless it has received a properly certified shipping paper (see § 174.24).

(b) A detailed hazardous materials incident report must be filed with MTB in the event of an unintentional release or other reportable circumstance (see §§ 171.15 and 171.16) and any contamination resulting from a release must be cleaned up (§ 174.75(a)).

**Air:** (a) Excepted from all requirements of the HMR, including shipping paper provisions and hazardous materials incident reports. (see § 173.10(a)(6)).

**Water:** (a) Excepted from none of the requirements of Part 176, and therefore must have proper shipping papers (see § 176.24).

(b) A detailed hazardous materials incident report must be filed with MTB in the event of an unintentional release or other reportable circumstance (see §§ 171.15 and 171.16) and any contamination resulting from a release must be cleaned up (§ 176.710).

**Highway:** (a) A carrier may not transport a package containing a limited quantity of radioactive materials unless it is accompanied by a properly prepared shipping paper (see § 177.817).

(b) A detailed hazardous materials incident report must be filed with MTB in the event of an unintentional release or other reportable circumstance (see §§ 171.15 and 171.16) and any resulting contamination must be cleaned up (§ 177.861).

It can be seen that the span of control over these materials ranges all the way from being practically negligible when transported by aircraft to very extensive when transported by vessel. MTB believes that the inherent risks associated with the transportation of these materials by each mode are not sufficiently different to justify this disparity. Consequently, this ANPRM seeks public comment from shippers, carriers, emergency response personnel and other interested persons in helping to resolve these differences, or otherwise support their continued existence based upon a technical review of the regulations with consideration given to the nature, form and quantities of radioactive materials involved.

### II. Current Regulatory Activities

In Docket HM-166, Notice No. 79-1 (44 FR 1852, January 8, 1979) the MTB proposed a general revision of the HMR as they apply to radioactive materials to make them more compatible with international standards. Although a considerable amount of comment was received with respect to limited quantities, most of it addressed specific requirements such as the proposed elimination of the marking exception. Other commenters suggested that the all encompassing exception applicable to aircraft should be extended to the other modes. Although useful, the information in that Docket does not provide MTB with a complete set of data for use in making a thorough safety analysis for these materials by all modes.

On November 23, 1979, MTB published a notice of receipt of an application for exemption—8300-N (44 FR 67267). In this application United Parcel Service is seeking an exemption from the requirements for shipping papers when limited quantities of radioactive materials are to be

transported by rail or over the public highways. Once again the MTB received public comment urging favorable action in this area but still it appears that even with the addition of these comments, and the data provided therein, the Bureau is not sufficiently informed to resolve the broader issues addressed in this inquiry.

In the area of international transportation regulations, the MTB is aware of current proposals to the "Technical Instructions for the Safe Transport of Dangerous Goods by Air" in which the International Civil Aviation Organization (ICAO) would treat limited quantities of radioactive materials as essentially unregulated commodities. To qualify for this exception the radioactive materials would have to meet a definition of limited quantity equivalent to one of those proposed in Docket HM-166, be packaged in accordance with general requirements applicable to all radioactive materials, and except for articles manufactured from natural or depleted uranium or natural thorium and empty packages, contain the marking "Radioactive" so that it is visible upon opening the package. These materials could then be offered for transportation without an accompanying detailed shipping paper. Instead the shipper need only indicate the presence of these hazardous materials by entering a specified phrase—for example, "excepted radioactive material"—on whatever shipping document

accompanies the shipment. These proposals seem to evolve from present operating practices long since adopted by international air carriers with apparently no adverse impact on health or safety. To the extent that air carriers and certain international officials believe the public health and safety are adequately protected by these procedures considering the very small quantities of radioactive material involved, the MTB believes that it is worth investigating their applicability to other modes as well.

One of the functions a shipping paper provides is to make detailed information available to emergency response or cleanup personnel responding to an accident. In this regard, it has been alleged by some shippers and carriers that the information is not imperative due to the very small quantities of radioactive materials that may be shipped this way. Additionally, this detailed information is available or can be obtained from the consignor and the need to provide this information on the shipping papers has been questioned. Consequently, the MTB is interested in determining if the detailed description required by § 172.203 is necessary for adequate response to accidents, considering the limited hazard of these materials and other methods which are



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available for obtaining this information in a timely manner.

Another area for consideration is the marking requirements for these materials. There is an important interface between shipping papers and marking as they relate to:

- (a) recognition that a hazardous material is being shipped;
- (b) identification of the material being shipped;
- (c) proper handling and stowage of the materials involved; and
- (d) appropriate action in the event of an accident.

Therefore, the MTB is also seeking comments on how the marking requirements may need to be modified if the shipping paper requirements are changed.

### III. Request for Comment

Comment is solicited on the preceding discussion and on the following questions. Do the requirements presently contained in the HMR, applicable to the transportation of limited quantities of radioactive materials, provide an appropriate degree of regulation to adequately protect the public health and safety?

#### (a) If so—

- (1) How do the transportation conditions of the various modes differ to justify diversity of regulatory control?
- (2) Can the exception from package marking requirements be supported to show that protection of the public health is not being jeopardized?
- (3) In the case of intermodal transfers, do the more restrictive regulations impose an unwarranted economic burden without providing a commensurate increase in safety?
- (4) Does the lack of an incident reporting requirement for limited quantities of radioactive materials transported by aircraft significantly diminish the effectiveness of the DOT's accident analysis system?

#### (b) If not—

- (1) How should the regulations be revised?
- (2) Do the hazards associated with all limited quantity radioactive materials and devices pose such a low risk that the MTB can remain confident in this exception, or should certain radionuclides, forms, etc. be excluded from limited quantity exceptions?
- (3) What would be the approximate cost/benefit of any suggested change?
- (4) Will there be an adverse impact on emergency response activities if detailed shipping paper requirements are waived for rail, water, and highway shipments of limited quantities?

(5) Do the marking requirements need to be modified if the detailed shipping paper requirement is waived for rail, water and highway shipments? If so, how?

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53, App. A to Part 1, and paragraph (a)(4) of App. A to Part 106)

*Note*—The Materials Transportation Bureau has determined that this document will not result in a major economic impact under the terms of Executive Order 12221 and DOT implementing procedures (44 FR 11034) nor require an environmental impact statement under the National Environmental Policy Act (49 U.S.C. 4321 et. seq.). A regulatory evaluation is available for review in the docket.

Issued in Washington, D.C., on November 28, 1980.

Alan L. Roberts,

*Associate Director for Hazardous Materials Regulation, Materials Transportation Bureau.*

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to expand the scope of permissible contentions to include issues as to the necessity for or compliance with certain TMI-related requirements that are supplementary to existing regulations.

In order to focus litigation of TMI-related issues, the Commission instructs its staff to utilize, to the maximum extent practicable, the Commission's existing summary disposition procedures in responding to TMI-related contentions.

The Commission believes that where the time for filing contentions has expired in a given case, no new TMI-related contentions should be accepted absent a showing of good cause and balancing of the factors in 10 CFR 2.714(a)(1). The Commission expects strict adherence to its regulations in this regard.

Also, present standards governing the reopening of hearing records to consider new evidence on TMI-related issues should be strictly adhered to. Thus, for example, where initial decisions have been issued, the record should not be reopened to take evidence on some TMI-related issue unless the party seeking reopening shows that there is significant new evidence, not included in the record, that materially affects the decision.

Separate and dissenting views of Commissioners Gilinsky and Bradford are attached.<sup>12</sup>

Dated at Washington, D.C., the 16th day of June 1980.

Samuel J. Chilk,  
Secretary of the Commission.

### Commissioner Gilinsky's Separate Views Regarding the Commission's Policy Statement—Commission Guidance for Power Reactor Operating Licenses

I regard the Action Plan as a directive to the staff from the Commission acting in its supervisory capacity and expect that it will be given appropriate deference by the adjudicatory boards. However, in view of the fact that the Action Plan and the NTOL list are not regulations, and are not the result of a public proceeding, they cannot be given the weight of rules. Nor does the fact that the Commission spent a great deal of time developing the Action Plan change the situation. There were many items to deal with and the Commission did not spend much time on each of them and very little on some. Moreover, as Commissioner Bradford has pointed

out, the industry has had extensive opportunities to comment on the Action Plan and to obtain changes, which in almost all cases have resulted in a reduction of the requirements initially proposed by the staff. To now limit litigation to the issues of whether these requirements have been satisfied or are excessive, and to exclude discussion of whether they go far enough, is a manifestly unfair and unwise policy.

### Dissenting Views of Commissioner Bradford

To curtail the rights of parties involved in NRC adjudicatory proceedings through the device of a policy statement is, if it is legal at all, a radical act requiring (one would have thought) urgent justification. The justifications advanced in this case amount to no more than a bored yawn toward the concerned public. Specifically, they are: (1) We have worked very hard, and what we have done is too complicated to defend; (2) We are too busy to listen to you, and despite our \$400 million annual budget, we can't afford to hear you;<sup>13</sup> and (3) Because the plan involves "policy" common to all cases rather than to a specific number of them, the public should not be heard on it at all. There are four reasons why the Commission should not be taking this action, even assuming that it has the power to do so.

First, the action embodies precisely the complacency that the Kemeny Commission, among others, suggested as a strong contributing factor to the accident at Three Mile Island. Rather than strengthening the role of the public in NRC proceedings as advocated by both the Kemeny Commission and the NRC's own Special Inquiry Group Report, this action lessens the public's ability to comment on the adequacy of many of the technical responses to Three Mile Island. This attitude that the regulatory agency and the industry between them know best ignores a series of failures in the AEC/NRC licensing history of which Three Mile Island was only the most dramatic example. It is noteworthy that the staff, which did most of the work on which the Commission now relies, did not recommend such a policy statement. It appears that they may briefly have learned more than the Commission.

Second, the action is clearly unfair. One set of prospective litigants—the industry—has been extensively involved

in the development of the Action Plan. An industry panel met with the Commission, and the industry has been in constant contact with the staff and in the providing of written comments throughout the process. The plan has never been put out for public comment, and little or no public comment has taken place. However, as a result of the Commission's actions, the only group that will be permitted to contest the questions at issue here will be the industry. Thus, those who have had the greatest say in shaping the Action Plan will now be able to challenge its requirements further, while those who have had no say in shaping it will be foreclosed from challenging the very requirements that they have had no opportunity to comment on.

Third, this action is unnecessary. For one thing, legitimate processes exist through rulemaking for the Commission to develop a document of general applicability. I would not have recommended it in this case, but such a process would at least have cured the worst of the defects in the Commission action. Furthermore, even without a rulemaking, the Action Plan could have been used to shape the staff position in NRC hearings. As a practical matter, the would have made it a document of considerable influence. In uncontested cases, it would clearly have governed. Intervenor in contested cases would have been taking on a very heavy burden in trying to go against a staff position and convinced the Commission to change its mind on a document that it had already approved. However, they would have least had a chance to prepare a record and to make the attempt.

Fourth, the Commission's action does not lend the desired certainty to the process. For one thing, it is certainly subject to challenge pursuant to *Pacific Gas and Electric Company v. Federal Power Commission*, 506 F.2d 33 (D.C. Cir. 1974). Should such a challenge prevail, the Commission will have lost far more time than it can possibly be saving through the measures taken here.

For another thing, it makes no sense for the Commission to take this action on the eve of the advent of a new Chairman, whose appointment is part of the President's response to Three Mile Island. In order that no party rely unduly on the policy statement at this time, I am hereby giving notice that I intend to seek its reconsideration and revocation upon the arrival of the President's new appointee. It may of course be that no change will occur, but at least the new appointee will have had a voice in choosing a vital policy which he or she must preside over and defend.

<sup>12</sup> Section 201 of the Energy Reorganization Act, 42 U.S.C. § 5841 provides that action of the Commission shall be determined by a "majority vote of the members present." Commissioner Bradford was not present at this Affirmation session, but had previously indicated his intention to dissent. Had Commissioner Bradford been present at the meeting he would have dissented. Accordingly, the formal vote of the Commission was 3-1 in favor of the decision.

<sup>13</sup> The statement that the Commission would have "to litigate the entire Action Plan in each proceeding (policy statement, page 8)" is of course false, and it reveals just how little the Commission understands its own proceedings. The entire Action Plan is not at issue here—only those items not within the reach of current regulations. Furthermore, it is inconceivable that each of those items (or even most of them) would be litigated in every proceeding.

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45 FR 50613

Published 7/30/80

Comment period expires 10/28/80

➤ Comment period extended to 12/24/80 \*

### 10 CFR Ch. I

#### NRC Action Plan; Request for Comments

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Request for comments.

**SUMMARY:** In response to the March 28, 1979 accident at Three Mile Island Unit No. 2, the Commission has approved an NRC Action Plan. The Plan provides a comprehensive and integrated approach for the necessary correction and improvement of the regulation and operation of nuclear facilities based on the experience from the accident and the official studies and investigations of the accident. Many of the required immediate actions have already been taken by nuclear reactor licensees and others are scheduled to be complete by the end of 1980. However, there are other long term actions, studies, and research described in the Plan from which future regulatory requirements will be drawn. The Commission believes that the views of the public on the NRC Action Plan would be of help to it in evaluating the Plan's impact, both short term and long term, and in assessing the possible need for modification of the Plan.

**DATE:** Comment period expires: October 28, 1980.

**ADDRESSES:** Written comments or suggesting for consideration in connection with the NRC Action Plan should be sent to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments received may be examined at the Commission's Public Document Room at 1717 H Street NW, Washington, D.C. A copy of the NRC Action Plan (NUREG-0660, "NRC Action Plan Developed as a Result of the TMI-2 Accident") is also available for inspection at the same address. It is also available at all NRC Local Public Document Rooms (LPDRs). A revision, which consists of a new Chapter V and corrections for several errors found in the original text, will be issued in August 1980 to all recipients of the May 1980 version.

Copies of the NRC Action Plan (NUREG-0660, "NRC Action Plan

Developed as a Result of the TMI-2 Accident") are available upon request by persons who wish to comment, at no cost, from NRC's GPO Sales Program, Division of Technical Information and Document Control, ATTN: Sales Manager, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Phone 301-492-9530).

**FOR FURTHER INFORMATION CONTACT:** Mr. Warren Minners, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301-492-7581).

**SUPPLEMENTARY INFORMATION:** The NRC Action Plan was developed to provide a comprehensive and integrated plan for the actions now judged necessary by the Nuclear Regulatory Commission to correct or improve the regulation and operation of nuclear facilities. The Action Plan was based on the experience from the accident at Three Mile Island and the official studies and investigations of the accident.

Those who have investigated the accident include the Congress, the General Accounting Office, the President's Commission on the Accident at Three Mile Island, the NRC Special Inquiry Group, the NRC Advisory Committee on Reactor Safeguards (ACRS), the Lessons-Learned Task Force and the Bulletins and Orders Task Force of the NRC Office of Nuclear Reactor Regulation, the Special Review Group and the NRC Office of Inspection and Enforcement, the NRC Staff Siting Task Force and Emergency Preparedness Task Force, and the NRC Offices of Standards Development and Nuclear Regulatory Research.

In the development of the Action Plan, NRC has transformed the recommendations of these groups into discrete, scheduled tasks that specify changes (or studies of possible future changes) in NRC's regulatory requirements or its organization and procedures. The Plan also identifies the organizational elements responsible for the various actions and contains estimates of the resources and schedule necessary for both NRC and the industry to accomplish the actions. As is the nature of any plan, the actions, resources, and schedules in the near term are likely to be more accurate than are those for the long term. In recognition of this, the overall plan is not intended to be inviolable—changes in the specified actions will be made as necessary to reflect new information.

Some actions to improve the safety of nuclear power plants now operating were judged to be necessary immediately after the accident and could not be delayed until an action plan was developed, although they were subsequently included in the Action

Plan. Such actions came from the Bulletins and Orders issued by the Commission immediately after the accident, the first report of the Lessons-Learned Task Force issued in July 1979, the recommendations of the Emergency Preparedness Task Force, and the NRC staff and Commission. Before these immediate actions were applied to operating plants, they were approved by the Commission. Many of these short term actions have already been implemented.

Development of the Action Plan began after the immediate corrective actions were well under way and at a time when the principal external investigation, that of the President's Commission, had been completed. In developing the Action Plan, the various recommendations and possible actions of all the principal investigations were assessed and either rejected, adopted, or modified. These assessments and decisions were made under the direction of a TMI Action Plan Steering Group, which served to integrate and coordinate the development of the Action Plan by the various program offices of the agency. The decisions on whether to include specific items in the Plan were based primarily on whether they were necessary to respond to the recommendations of the principal investigations. However, decisions on the priority and resources to be afforded the various actions in the Plan have been based primarily on their relative risk-reduction potential. Having considered the various recommendations and various ways of responding to them, the Action Plan represents a collective NRC assessment of the types and degree of improvement that are necessary and describes the means and schedule for attaining the improvements.

When determining the schedules for developing and implementing changes in requirements, the primary concern was the perceived immediacy of the need for corrective actions. As discussed above, many actions were taken to improve safety immediately or soon after the accident. These actions were generally considered to be interim improvements until a better, more comprehensive, or more desirable solution could be implemented. However, in scheduling the longer term improvements, the availability of both NRC and industry resources was also considered, as well as the safety significance of the actions. Thus, the Action Plan presents a sequence of actions that will result in a gradually increasing improvement in safety as individual actions are completed and the initial immediate actions are replaced or supplemented by longer term, more durable

\* Amended 45 FR 79819



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improvements.

On May 15, 1980, after review of the last version of the Action Plan, the Commission approved the staff's recommendations on those items in the Action Plan that should be implemented or considered over the long term to further enhance safety and also approved a list of requirements for new operating licenses which the staff recommended for imposition in current operating license reviews. On June 5, 1980, the Commission provided further guidance to the NRC staff on implementing the new operating license requirements of the NRC Action Plan. The Office of Nuclear Reactor Regulation was directed to proceed with safety evaluations using the list of new requirements and, in cases where Atomic Safety and Licensing Boards (ASLBs) have been awaiting NRC staff actions, preparation and presentation of testimony before Boards in individual operating license cases.

On June 16, 1980, the Commission issued a Statement of Policy (45 FR 41738) as further Commission guidance on operating licenses for the Boards and the NRC staff. Accompanying this policy was a report, "TMI-Related Requirements for New Operating Licenses (NUREG-0694)." The Commission decided that current operating license applications should be measured against the regulations, as augmented by the list of new requirements in NUREG-0694, and that the remaining items of the Action Plan should be addressed through the normal process for development and adoption of new requirements rather than through immediate imposition on pending applications.

The staff has been directed to seek public comment on the TMI-2 Action Plan for the purpose of developing further refinements, particularly with respect to the establishment of priorities for addressing those remaining items in the Action Plan not included in the list of new requirements for operating licenses. In the event that public comments lead the staff to conclude that substantive changes to the list of requirements for new operating licenses are necessary, the Commission will be promptly notified.

45 FR 65726

Published 10/3/80

Comment period expires 11/7/80

Correction published 11/3/80

➤ Comment period extended to 12/22/80 \*

### Evaluation of Agreement State Radiation Control Programs: Proposed General Statement of Policy

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Proposed general statement of policy.

**SUMMARY:** The Nuclear Regulatory Commission proposes to adopt as a general statement of policy the recently revised "Guide for Evaluation of State Radiation Control Programs Under Agreement With the U.S. Nuclear Regulatory Commission Pursuant to Section 274 of the Atomic Energy Act of 1954, As Amended", February 1, 1980. The revised Guide which was prepared by the NRC staff incorporates new criteria and guidelines for acceptable practice by Agreement States. This proposed statement of policy is being issued to inform the public of the criteria and guidelines which the Commission intends to use in evaluating Agreement State radiation control programs. The Commission expects that further revisions may be needed and is, accordingly, requesting comments on the proposed statement of policy including the criteria and guidelines for acceptable practice by Agreement States.

**DATES:** Comments are due on or before November 17, 1980.

**ADDRESSES:** All interested persons who desire to submit written comments or suggestions for consideration in connection with this proposed statement of policy should send them to Director, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Copies of public comments on this proposed policy statement may be examined at the Commission's Public Document Room at 1717 H Street, N.W., Washington, D.C.

**FOR FURTHER INFORMATION CONTACT:** John R. McGrath, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555—Telephone: 301-492-7767.

**SUPPLEMENTARY INFORMATION:** Section 274 of the Atomic Energy Act of 1954, as amended, was enacted in 1959 to provide a statutory means by which the NRC (then the AEC) could relinquish to the States part of its regulatory authority. The mechanism for the transfer of the Commission's regulatory authority is by an agreement between the Governor of a State and the Commission. Thus far, 26 States have entered into such agreements.<sup>1</sup>

Before entering into an agreement, the NRC is required to make a finding that the State's radiation control program is compatible with the Commission's and

that the State program is adequate to protect the public health and safety. Section 274j of the Atomic Energy Act provides that the NRC may terminate its agreement with a State if the Commission finds that such termination is necessary to protect the public health and safety or the State has not complied with one or more of the requirements of Section 274. In May 1965, the Commission adopted a policy of making an annual redetermination of the Agreement States' adequacy and continued compatibility with the NRC program. These determinations are primarily based on review meetings during which the individual State regulatory programs are evaluated on the basis of the "Guide for Evaluation of Agreement State Radiation Control Programs." Other factors such as information obtained through the NRC-State exchange-of-information program are also considered. Under the exchange-of-information program States provide to the NRC copies of all licensing actions taken by the State. In addition, the program involves exchanging information between the NRC and the States on the development of new regulations, and revisions to licensing and compliance policy, practices, and procedures. The States also provide information on incidents and other abnormal occurrences. As a result of the review of a State program, the NRC determines that the Agreement State's program is either:

- (1) Adequate to protect the public health and safety; or
- (2) Inadequate to protect the public health and safety.

A program may be adequate to protect the public health and safety although in need of improvement in specified areas or NRC may be unable to make a finding at the time of the review because of unresolved items or inadequate information necessitating a follow-up review. In such cases NRC follows up on these matters by correspondence, follow-up reviews or at the time of the next review.

A determination is also made that the program is either:

- (1) Compatible with the NRC Regulatory program in areas related to the public health and safety; or
- (2) Incompatible with the NRC Regulatory program;

or NRC is unable to make a finding at the time of the review because of unresolved items or inadequate information. A dispositive finding is made at the time the staff submits a consolidated assessment to the Commission in an annual report on all Agreement States.

In making a finding of adequacy, the NRC considers areas of the State

<sup>1</sup> Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Kansas, Kentucky, Louisiana, Maryland, Mississippi, Nebraska, Nevada, New Hampshire, New Mexico, New York, North Carolina, North Dakota, Oregon, Rhode Island, South Carolina, Tennessee, Texas and Washington.



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program which are critical to its primary function, i.e., protection of the public health and safety. For example, a State that does not have qualified personnel, fails to take adequate licensing actions or has no inspection program, would not be considered to have a program adequate to protect the public health and safety. Basic radiation protection standards, such as exposure limits, directly affect the States' ability to protect public health and safety. The NRC feels that it is important to strive for a high degree of uniformity in technical definitions and terminology, particularly as related to units of measurement and radiation dose. Maximum permissible doses and levels of radiation and concentrations of radioactivity in unrestricted areas as specified in 10 CFR Part 20 are considered to be important enough to require States to be essentially equivalent in this area in order to protect public health and safety. Basic radiation standards are also considered to be matters of compatibility. Certain administrative procedures, such as those involving the licensing of products containing radioactive material intended for interstate commerce, are considered to be matters of compatibility.

If an Agreement State has adequate standards, compatible program procedures, and has acceptable performance NRC makes a finding of adequacy and compatibility. It is possible that a State program could have up-to-date regulations, all proper procedures, and adequate staff, but still fail to perform the necessary work. In this case a program could be found to be inadequate to protect the public health and safety, yet compatible with the Commission's program. In the worst case, a program can be found to be both inadequate and incompatible with the NRC program.

Section 274g of the Act directs the Commission " . . . to cooperate with the States in the formulation of standards for protection against hazards of radiation to assure that State and Commission programs for protection against hazards of radiation will be coordinated and compatible." Section 274j gives the Commission the authority to terminate or suspend an agreement with a State. Before the Commission can take such action, it must find that "(1) such termination or suspension is required to protect the public health and safety or (2) the State has not complied with one or more of the requirements of this section." The formal agreement, which the Governor signs, pledges the State to "use its best efforts . . . to assure that the State's program will continue to be compatible."

The results of Agreement State program reviews are reported to the radiation control program director and

upper level State management. In addition to the findings on adequacy and compatibility, comments and recommendations for improvement of the program may also be provided.

The Commission proposes to adopt as its general statement of policy a revised "Guide for Evaluation of Agreement State Radiation Control Programs Under Agreement With The U.S. Nuclear Regulatory Commission Pursuant to Section 274 of the Atomic Energy Act of 1954, As Amended", February 1, 1980, which identifies six essential elements of a radiation control program. These elements are: Organization, Administration, Personnel, Regulations, Licensing, and Compliance. The Guide divides each element into component parts or indicators, and establishes guidelines for acceptable practice under each indicator. The Guide includes 35 indicators and 102 guidelines for acceptable practice. Obviously, the indicators and guidelines in the Guide are not all of equal importance.

The revised Guide also utilizes categories of indicators. The purpose of the categories is to indicate the potential seriousness of deficiencies in the program areas addressed by the various indicators. Category I indicators reflect a State program's ability to adequately protect the public health and safety. Significant problems in meeting the guides for acceptable practice for these indicators probably means the State program has a serious need for improvement. If significant problems exist in more than one of these areas, then the need for improvements may be critical. Category II indicators address functions and activities which support a States' program. Good performance in meeting the guidelines for these indicators is considered essential if the State is to avoid significant problems in conducting an effective program to protect the public health and safety. Category III indicators address those areas of a State program which are considered highly desirable features of a soundly based, comprehensive program for controlling agreement materials, but which have little or no direct bearing on the State's ability to protect the public health and safety. These categories of indicators reflect the potential seriousness of deficiencies in various program areas. NRC obviously uses discretion in reviewing deficiencies within the various categories.

It is the NRC's intention to use these categories in the following manner. In reporting findings to State management, the NRC will indicate the category of each comment made. If no significant Category I comments are provided, this will indicate that the program is adequate to protect the public health and safety. If at least one significant Category I comment is provided, the

State will be notified that the program deficiency may seriously affect the State's ability to protect the public health and safety and should be addressed on a priority basis. When more than one significant Category I comment is provided, the State will be notified that the need of improvement in the particular program areas is critical. The NRC would request an immediate response, and perform a follow-up review of the program within six months. If the State program has not improved or if additional deficiencies have developed, the NRC may institute proceedings to suspend or revoke all or part of the Agreement. Category II comments would concern functions and activities which support the State program and therefore would not be critical to the State's ability to protect the public. The State will be asked to respond to these comments and the State's actions will be evaluated during the next regular program review. Category III deficiencies likewise will be brought to the State's attention and the State's actions evaluated during the next regular review.

On November 13, 1979, a draft of the revised Guide was sent to the Agreement States for comment. The draft revised Guide was also reviewed by NRC staff offices. Comments were received from fifteen Agreement States. The States were generally supportive of the current NRC review program but were opposed to codification of the criteria. One State commented that the primary indicators of a State's ability to protect the public health and safety are the exposure experience of radiation workers, patients in nuclear medicine and the public in the vicinity of licensed facilities and suggested that the Commission develop standard methods for the assessment of such exposures.

Other State comments and concerns were as follows:

1. What constitutes compatibility?
2. The criteria for the administrative aspects of the Agreement State program are too detailed.
3. The criteria should also address the political environment of the program such as the effect of public opinion on the operation of the program.
4. During the review process contact with the Governor and/or the State Legislature should normally be made.
5. Much of the periodic review is repetitive and could be streamlined.
6. One State questioned the NRC's ability to meet the criteria it uses to evaluate the States.

Some general comments generated by the Commission staff were as follows:

1. The technical qualifications of the Agreement State staff to handle a broad range of safety matters which could arise in Agreement State programs should be improved.
  2. The NRC should use performance data, such as incident reports, to assess the effectiveness of State programs.
- With regard to the development of specific indicators related to exposure experience of radiation workers, patients in nuclear medicine and the public in the vicinity of licensed facilities and use of performance data

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1. Failure to make a followup written report as required by 10 CFR 20.402(b), 20.408, and 20.409; or

2. Any other matter, including failure to follow procedures, that has other than minor safety or environmental significance.

F. Severity VI—Violations that have minor safety or environmental significance.

### Supplement V.—Severity Categories

#### Transportation

A. Severity I—Violations of NRC transportation requirements involving:

1. Radiation exposure of a member of the public in excess of 0.5 rems of radiation; or

2. Loss of package integrity resulting in surface contamination or external radiation levels in excess of ten (10) times the NRC or Department of Transportation (DOT) limits.

B. Severity II—Violations of NRC transportation requirements involving:

1. Loss of package integrity resulting in surface contamination or external radiation levels in excess of NRC or DOT requirements;

2. Surface contamination or external radiation levels in excess of three times NRC or DOT limits that did not result from a breach of package integrity; or

3. Failure to make required initial notifications associated with Severity Level I or II violations.

C. Severity III—Violations of NRC transportation requirements involving:

1. Breach of package integrity;

2. Surface contamination or external radiation levels in excess of, but less than a factor of three above NRC or DOT requirements, that did not result from a breach of package integrity;

3. Any noncompliance with labelling, placarding, shipping paper, packaging, loading, or other requirements that could reasonably result in the following:

a. Improper identification of the type, quantity, or form of material;

b. Failure of the carrier or recipient to exercise adequate controls; or

c. Substantial potential for personnel exposure or contamination; or

4. Failure to make required initial notification associated with Severity Level III violations.

D. Severity IV—Violations of NRC transportation requirements involving:

1. Any noncompliance involving package selection or preparation requirements which does not result in a breach of package integrity or surface contamination or external radiation levels in excess of NRC or DOT requirements.

2. Failure to follow procedures; or inadequate procedures, not covered in

Severity Level I, II, or III violations; that reduces the margin of safety; or

3. Inadequate review or failure to make a review in accordance with 10 CFR Part 21.

E. Severity V—Other violations, such as failure to follow procedures, that have other than minor safety or environmental significance.

F. Severity VI—Violations that have minor safety or environmental significance.

### Supplement VI.—Severity Categories

#### Fuel Cycle Operations

A. Severity I—Violations involving:

1. A nuclear criticality accident; or

2. A system designed to prevent or mitigate a serious safety event not being operable when actually required to perform its design function.

B. Severity II—Violations involving:

1. A system designed to prevent or mitigate a serious safety event being inoperative;

2. Conduct of activities not authorized by the license that have a significant safety implication; or

3. Failure to make an immediate or prompt report required to be made by telephone or other electronic means.

C. Severity III—Violations involving:

1. A degraded system designed to prevent or mitigate a serious safety event (e.g., confinement barriers or criticality controls); or

2. Operation with a technically unqualified or unauthorized person resulting in a reduced margin of safety.

D. Severity IV—Violations involving:

1. Inadequate review or the failure to review activities in accordance with 10 CFR Part 21 or management reviews required by the license that are not performed or are performed inadequately but that do not result in a Severity Level I, II, or III violation;

2. Any operation limit not covered by Severity Level I, II, or III violations being exceeded;

3. Failure to follow requirements not covered in Severity Level I, II, or III violations, that reduces the margin of safety; or

4. Failure to make a required 30-day report.

E. Severity V—Other violations, such as failure to follow procedures, that have other than minor safety or environmental significance.

F. Severity VI—Violations that have minor safety or environmental significance.

### Supplement VII.—Severity Categories

#### Materials Operations

A. Severity I—Violations involving:

1. A technically unqualified or unauthorized person conducting a licensed activity that results in radiation levels, contamination levels, or releases that exceed 10 times the limits specified in the license;

2. Use of unauthorized equipment that results in radiation levels, contamination levels, or releases that exceed 10 times the limits specified in the license;

3. Possession or use of unauthorized materials requiring a license, that results in radiation levels, contamination levels, or releases that exceed 10 times the limits specified in the license;

4. Failure to perform required surveys, tests or evaluations, or to institute required safety precautions that results in radiation levels, contamination levels, or releases that exceed 10 times the limits specified in the license; or

5. A system designed to prevent or mitigate a serious safety event not being operable when actually required to perform its design function.

B. Severity II—Violations involving:

1. A technically unqualified or unauthorized person conducting a licensed activity that results in radiation levels, contamination levels, or releases in excess of license limits;

2. Possession or use of unauthorized equipment or material in the conduct of licensed activities that results in radiation levels, contamination levels, or releases that exceed limits specified in the license.

3. Failure to perform required surveys, tests, or evaluations that results in radiation levels, contamination levels, or releases that exceed the limits specified in the license.

4. Failure to make required initial notifications associated with Severity Level I or II violations; or

5. A system designed to prevent or mitigate a serious safety event being inoperative.

C. Severity III—Violations involving:

1. Failure to control access to licensed materials for radiation purposes as specified by NRC requirements;

2. Possession or use of unauthorized equipment or materials in the conduct of licensee activities;

3. Procurement of radioactive material for human use where such use is not authorized;

4. Conduct of licensed activities by a technically unqualified or unauthorized person;

5. Failure to make required initial notifications associated with Severity Level III violations; or

6. Degradation of a system designed to prevent or mitigate a serious safety event.

D. Severity IV—Violations involving:

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1. Failure to follow requirements not covered in Severity Level I, II, or III violations that reduce the margin of safety (e.g., failure to determine that a radiographic source is fully retracted after an exposure);

2. Failure to maintain patients containing cobalt-60, cesium-137, or iridium-192 implants hospitalized, to conduct required leakage or contamination tests, or use of improperly calibrated equipment; or

3. Inadequate review or the failure to review activities in accordance with 10 CFR Part 21 or management reviews required by the license that are either not performed or not performed adequately but that do not result in a Severity Level I, II, or III violation.

E. Severity V—Other violations, such as failure to follow procedures, that have other than minor safety or environmental significance.

F. Severity VI—Violations that have minor safety or environmental significance.

**SUPPLEMENTARY INFORMATION:** On July 30, 1980, the Commission published the "NRC Action Plan Developed as a Result of the TMI-2 Accident", NUREG-0660 (45 FR 50613). Public comments on the Plan were to be filed by October 28, 1980. This period was later extended to December 12, 1980 (45 FR 76446).

➤ 45 FR 80937

Published 12/8/80

Comment period extended to 12/22/80

### **Evaluation of Agreement State Radiation Control Programs; Proposed General Statement of Policy; Extension of Comment Period**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Proposed general statement of policy; extension of comment period.

**SUMMARY:** On October 3, 1980, Commission published for comment in the Federal Register (45 FR 65728) a proposed general statement of policy to adopt the recently revised "Guide for Evaluation of State Radiation Control Programs Under Agreement with the U.S. Nuclear Regulatory Commission Pursuant to Section 274 of the Atomic Energy Act of 1954, As Amended," February 1, 1980. This revised Guide, which was prepared by the NRC staff, incorporates new criteria and guidelines for acceptable practice by Agreement States. The October 3, 1980 notice specified that comments on the proposed general statement of policy were due on or before November 17, 1980. The Commission hereby extends the comment period to December 22, 1980.

**DATE:** The comment period is extended to December 22, 1980.

**ADDRESSES:** All interested persons who desire to submit written comments on this proposed statement of policy should send them to the Director, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Copies of public comments on this proposed policy statement may be examined at the Commission's Public Document Room at 1717 H Street, NW., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** John R. McGrath, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555 (Phone 301-492-7767).

➤ 45 FR 79819

Published 12/2/80

Comment period extended to 12/24/80

### **10 CFR Ch. I**

#### **Action Plan Developed as a Result of the Three Mile Island Accident**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Extension of comment period.

**SUMMARY:** The Commission is further extending the comment period on the "NRC Action Plan Developed as a Result of the TMI-2 Accident", NUREG-0660 (45 FR 50613). The initial comment period expired October 28, 1980, and was extended by the Commission to December 12, 1980 (45 FR 76446). This extension is necessary to permit public comment on recent modifications to the Plan.

**DATE:** Comment period expires December 24, 1980.

**ADDRESSES:** Written comments should be sent to the Secretary of the Commission, Attention: Docketing and Service Branch, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

**FOR FURTHER INFORMATION CONTACT:** Mr. Warren Minners, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301-492-7581).

## MEMORANDA OF UNDERSTANDING

Understanding as required by section 122(c)(2) of the Clean Air Act, as amended in 1977, with respect to the regulation of radionuclide emissions into air from sources and facilities licensed by NRC. This Memorandum defines in general terms the respective roles of the two agencies and establishes a framework of cooperation for avoiding unnecessary duplication of effort and for conserving resources in establishing, implementing, and enforcing standards for airborne radionuclide emissions from sources and facilities licensed by NRC. This Memorandum may be revised in the future as EPA develops Clean Air Act radionuclide standards applicable to NRC licensees.

**ADDRESSES:** Docket No. A-79-11, containing material relevant to this action, is located in the U.S. Environmental Protection Agency, Central Docket Section, Waterside Mall, West Tower Lobby, Gallery One, 401 M Street, SW, Washington, DC. The Docket may be inspected between 8 a.m. and 4 p.m. on weekdays, and a reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** Paul J. Magno, Office of Radiation Programs (ANR-480), U.S. Environmental Protection Agency, Washington, DC 20460, telephone (703) 557-7380, or John W. N. Hickey, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 443-5966.

**SUPPLEMENTARY INFORMATION:** Under various statutes both EPA and NRC have the authority to regulate radioactive emissions of source material, byproduct material, and special nuclear material into the air. Under the Atomic Energy Act of 1954 and Title II of the Energy Reorganization Act of 1974, NRC is authorized to license and regulate the manufacture, production, receipt, acquisition, possession, ownership, use, and transfer of source material, byproduct material, and special nuclear material.<sup>1</sup> Under the Clean Air Act, as amended in 1977, EPA was also given the authority to regulate air emissions of source material, byproduct material, and special nuclear material.<sup>2</sup>

Section 122(a) of the Clean Air Act, as amended in 1977, directed the

Administrator of EPA to determine whether emissions of radioactive pollutants (including source material, byproduct material, and special nuclear material) into ambient air will cause or contribute to air pollution which may reasonably be anticipated to endanger public health. If the Administrator made an affirmative finding, he was required to list radioactive pollutants as substances to be regulated under the Clean Air Act.

On December 27, 1979, the Administrator of EPA made an affirmative finding and listed "radionuclides" as hazardous air pollutants under Section 112 of the Clean Air Act (44 FR 76738, December 27, 1979). The term "hazardous air pollutant," as defined by Section 112, means an air pollutant to which no ambient air quality standard is applicable and which causes or contributes to air pollution which may reasonably be anticipated to result in an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness. After listing radionuclides as hazardous air pollutants under Section 112 of the Clean Air Act, the Administrator must promulgate regulations establishing standards for these pollutants, and where applicable, all sources and facilities emitting these pollutants, including NRC-licensed sources and facilities, must comply with these standards.

NRC-licensed sources and facilities include nuclear power plant operations and other activities in the nuclear fuel cycle, research and development laboratories, universities, research and test reactors, hospitals, radiopharmaceutical facilities, industrial users and various miscellaneous users of source material, byproduct material, and special nuclear material. Radionuclide air emissions from these licensed sources and facilities are already limited or controlled by a number of existing regulations and standards, including:

1. 10 CFR Part 20, "Standards for Protection Against Radiation," which among other things specifies limits for radionuclide releases into air from all NRC licensees and includes the provision that these releases should be "as low as reasonably achievable" (ALARA);

2. Appendix I of 10 CFR Part 50,

<sup>3</sup> This standard was issued by EPA under the Atomic Energy Act authority to establish generally applicable environmental radiation standards. Uranium fuel cycle facilities subject to 40 CFR 190 and regulated by NRC, include uranium mills, uranium conversion plants, uranium fuel fabrication plants, light-water-cooled nuclear power plants using uranium fuel, and spent uranium fuel reprocessing plants, as defined in 40 CFR 190 (42 F.R. 2858, January 12, 1977).

"Domestic Licensing of Production and Utilization Facilities," which specifies numerical design objectives to insure that radionuclide releases from light water nuclear power reactors are kept "as low as reasonably achievable" (this regulation is implemented by NRC through technical specifications on individual licensees which specify release limits); and

3. 40 CFR Part 190, "Environmental Radiation Protection Standards for Nuclear Power Operations," which establishes generally applicable standards for radionuclide emissions from uranium fuel cycle facilities.<sup>3</sup>

Recognizing the overlapping jurisdictional authorities resulting from the Clean Air Act Amendments of 1977, Congress, under Section 122(c)(2) of the Clean Air Act, as amended in 1977, directed EPA and NRC, no later than six months after EPA lists any source material, byproduct material, or special nuclear material as a substance to be regulated under the Act, to enter into an interagency agreement with respect to those sources or facilities which are under NRC's jurisdiction. The Act states that this agreement shall minimize duplication of effort and conserve resources in establishing, implementing, and enforcing Clean Air Act radionuclide standards for sources or facilities licensed by NRC.

EPA and NRC have entered into such an agreement. Under this agreement EPA shall promulgate standards for airborne radionuclide emissions under its Clean Air Act authority and NRC shall have the primary role in implementing and enforcing these standards where applicable for sources and facilities licensed by NRC. EPA shall inform NRC of proposed actions for the development of Clean Air Act radionuclide standards for sources and facilities licensed by NRC and shall consult regularly with NRC during the standards development process. NRC shall assist EPA in standards development by: (a) providing information and recommendations, (b) participating in studies, and (c) reviewing and commenting on proposed standards.

As EPA standards are developed for NRC-licensed sources and facilities, EPA and NRC will work together in developing mutually acceptable procedures for implementing and enforcing these standards. These efforts are expected to lead to a revision of this agreement defining the specific roles of each agency in implementing and enforcing these standards. This revision should be completed before EPA proposes its first standards applicable to NRC-licensed sources and facilities.

The text of the Memorandum of Understanding is set forth below.

<sup>1</sup> Source material, byproduct material, and special nuclear material are radioactive materials as defined in the Atomic Energy Act of 1954 as amended.

<sup>2</sup> Under the Atomic Energy Act of 1954 and Reorganization Plan No. 3 of 1970, EPA also is authorized to establish generally applicable environmental standards for protection of the general environment from radioactive materials. These standards, which apply outside the boundaries of NRC-licensed facilities, are implemented by NRC through its licensing authority.



## MEMORANDA OF UNDERSTANDING

### Memorandum of Understanding Between EPA and NRC Concerning the Clean Air Act, as Amended in 1977

In accordance with Section 122(c)(2) of the Clean Air Act, as amended in 1977, to minimize duplication of effort and conserve resources in the regulation of radionuclide emissions to air from sources or facilities licensed by NRC, EPA and NRC agree to the following:

#### I. Establishment of Standards

1. EPA shall promulgate standards for airborne radionuclide emissions under its Clean Air Act authority.

2. EPA shall inform NRC of proposed actions for the development of Clean Air Act radionuclide standards for sources and facilities licensed by NRC and shall consult regularly with NRC during standards development.

3. NRC shall assist EPA in standards development by:

- Providing EPA with available data and information on NRC-licensed sources and facilities as needed, including information on radionuclide air emissions, the environmental impact of these emissions, and control technology for reducing these emissions;
- Participating with EPA in carrying out any necessary special studies at NRC-licensed sources and facilities; and
- Providing recommendations and reviewing and commenting on EPA's proposed standards.

#### II. Implementation and Enforcement of Standards

1. NRC, using its own regulatory program and statutory and regulatory authorities, shall have the primary role in implementing and enforcing EPA's Clean Air Act radionuclide standards for sources and facilities licensed by NRC.

2. During the development of Clean Air Act radionuclide standards for NRC-licensed sources and facilities, EPA and NRC shall work together to establish mutually acceptable procedures for implementing and enforcing these standards. These procedures will be consistent with the provisions of the Clean Air Act and will allow both EPA and NRC to fulfill their statutory responsibilities with a minimum of duplication of effort. These procedures and the specific roles of each agency in carrying out these procedures will be defined in a revision to this agreement which should be completed before EPA proposes its first standards applicable to sources and facilities licensed by NRC.

#### III. Effective Date, Revision, and Termination

This Memorandum shall be effective immediately, and shall continue in effect

until revised by mutual agreement, unless terminated by either party upon 120 days notice in writing.

Dated: October 17, 1980.

David G. Hawkins,

Assistant Administrator for Air, Noise, and Radiation, U.S. Environmental Protection Agency.

Dated: October 24, 1980.

William J. Dircks,

Executive Director for Operations, U.S. Nuclear Regulatory Commission.

45 FR 75033

Published 11/13/80

### Nuclear Safety Information and Activities; Memorandum of Understanding Between the Nuclear Safety Oversight Committee and the Federal Emergency Management Agency with Respect to the Acquisition of Information and the Monitoring of Activities

1. The Nuclear Safety Oversight Committee (NSOC) was established pursuant to Executive Order 12202 (March 18, 1980) to advise "on the progress of Federal and State authorities and the nuclear power industry in improving the safety of nuclear power and in implementing the approved recommendations of the President's Commission on the Accident at Three Mile Island (Kemeny Commission)" set forth in the President's announcement and White House Fact Sheet of December 7, 1979 (copy attached to this memorandum). On September 28, 1980 the President issued Executive Order 12240, which extended the life of NSOC to September 30, 1981.

NSOC is responsible for the preparation and periodic submission of reports to the President, the Secretary of Energy, and the Secretary of Health and Human Services on the progress being made in each area. In addition, NSOC is specifically responsible to advise on the progress and activities of the Federal Emergency Management Agency (FEMA) in a variety of substantive and procedural areas identified in the Executive Order, Sec. 1-2. These include, but are not limited to, the following:

- The Federal program in safety research (Sec. 1-204);
- A coordinated program to improve worker and public health and safety (Sec. 1-205);
- A review of state and local off-site emergency planning and preparedness,

service civilian related radiological emergencies; and (6) assure the development of programs to address the recommendations for additional research and public education needs.

3. The Federal Emergency Management Agency, in recognition of NSOC's responsibility and essential need for information as described in paragraph 1, above, agrees to cooperate fully to assure that NSOC has complete and full access to all information, facilities, and personnel NSOC determines is required to fulfill its responsibility in an effective and timely manner. In order to effectuate this agreement in an orderly fashion, the NSOC and FEMA also agree to the following principles and arrangements:

#### a. Informal and Formal Arrangements

The NSOC, its staff and its properly designated consultants may regularly contact FEMA personnel at all levels to develop and implement informal or formal arrangements for complete and full access and/or acquisition to all information, facilities and personnel in the general and specific areas identified in paragraph 1, above. To the extent possible, the use of informal arrangements to implement this provision is preferred;

#### b. Designated Information Coordinator

FEMA shall designate a person to serve as information coordinator who will be directly responsible for providing, or for causing others to provide, the information requested by NSOC personnel. Contacts described in a. above shall be made only after the FEMA Information Coordinator has been informed that such a contact will be made. Any formal arrangements for providing FEMA information to NSOC shall be coordinated through the Designated Information Coordinator.

#### c. "Legal" Information Defined

The term "legal," as used in paragraph 1 of this memorandum includes, but is not limited to, (1) all briefs or memoranda filed by FEMA and the United States, in any Federal or state judicial proceeding, in a controversy involving nuclear safety, emergency planning or preparedness, or a subject matter which, in FEMA's view, relates to the responsibilities of NSOC; (2) opinions or memoranda issued by any Federal or state judicial tribunal in a controversy in which FEMA is a party and which involves the subject matter identified in subparagraph c (1), above; and (3) proposed legislation affecting FEMA's responsibility. FEMA agrees to arrange for the regular transmission of these materials to NSOC;

#### d. Operation not Materially Affected

## MEMORANDA OF UNDERSTANDING

and the progress of state and local governments in establishing emergency response plans (Sec. 1-206); and

- Improving public information on nuclear safety and FEMA's progress in coordinating any Federal response to potential nuclear emergencies (Sec. 1-207).

NSOC's acquisition or inspection of technical, scientific, legal and policy related information in FEMA's possession, the monitoring of FEMA's functions and activities, the availability and responsiveness of FEMA personnel, and NSOC's access to FEMA operated, financed or approved facilities or programs are essential to the effective and timely preparation and submission of its reports (see Sec. 1-208, and 1-304). Additionally, the President has directed NSOC to "include in its reports the Committee's advice as to the adequacy of the information it has received from Federal . . . agencies . . . ; and, its assessment of the cooperation it has received from them." (Sec. 1-201).

2. The Federal Emergency Management Agency, pursuant to Reorganization Plan No. 3 of 1978, Executive Order 12148 of July 20, 1979 and other laws and regulations, is responsible for, and coordinates civil emergency planning, management, mitigation and assistance functions of the executive agencies of the United States, and it works with state and local governments and the private sector to stimulate vigorous participation in civil emergency preparedness, mitigation, response and recovery programs.

In the President's announcement and White House Fact Sheet of December 7, 1979, referred to in paragraph 1 above and attached to this memorandum, the FEMA was directed to, *inter alia*, address the need for improved advance preparation for emergencies and public education programs in the context of state emergency response plans. Specifically, FEMA was directed to: (1) take the lead in off-site emergency planning and response; (2) complete by June 1980 the review of state emergency plans in those states with operating reactors; (3) complete as soon as possible the review of state emergency plans in those states with plants scheduled for operation in the near future; (4) develop and issue an updated series of interagency assignments which would delineate respective agency capabilities and responsibilities and clearly define procedures for coordination and direction for both emergency planning and response; (5) assure that DOE resources and capabilities for responding to radiological emergencies are made available and augmented as needed to

The implementation of this memorandum shall not materially impede or disrupt the operation, routine or regularized conduct of FEMA procedures and programs;

### *e. Authority not Affected*

Nothing in this memorandum, or in its implementation, or in any subsequent formal or informal arrangement is intended to restrict, modify or limit the authority of FEMA or the responsibility of the NSOC under Executive Order 12202, Executive Order 12240 and other applicable laws:

### *f. Classified Documents, Devices of Facilities*

Nothing in this memorandum, or in its implementation, is intended to alter, modify or change applicable requirements concerning the personal security clearance of individuals or the informational or physical security of classified documents, devices or facilities;

### *g. Responsible Agency Official and the Process of Amendment*

The General Counsel of the FEMA and the General Counsel of the NSOC will periodically review the effectiveness of this memorandum of understanding, particularly as it relates to NSOC's fulfillment of its responsibilities under Executive Order 12202 and Executive Order 12240 and develop formal and informal arrangements to correct any impediments, deal with problem areas or resolve disputes. The responsibilities agreed to in this memorandum may be amended by the exchange of letters between the General Counsel of NSOC and the General Counsel of FEMA.

4. This memorandum of understanding shall take effect upon its signing by authorized representatives of the respective agencies.

For the Nuclear Safety Oversight Committee.

Dated: November 7, 1980.

Bruce Babbitt.

Chairman, Nuclear Safety Oversight Committee.

For the Federal Emergency Management Agency.

Dated: October 28, 1980.

John W. Macy, Jr.,

Director, Federal Emergency Management Agency.



## REGULATORY GUIDES

### DIVISION 3 REGULATORY GUIDES FUELS AND MATERIALS FACILITIES

| Number   | Title                                                                                                                                    | Date  | Revision |
|----------|------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|
| 3.1      | Use of Borosilicate-Class Rashig Rings as a Neutron Absorber in Solutions of Fissile Material                                            | 1/73  |          |
| 3.2      | Efficiency Testing of Air-Cleaning Systems Containing Devices for Removal of Particles                                                   | 1/73  |          |
| 3.3      | Quality Assurance Program Requirements for Fuel Reprocessing Plants and for Plutonium Processing and Fuel Fabrication Plants             | 3/74  | 1        |
| 3.4      | Nuclear Criticality in Safety Operations with Fissionable Materials Outside Reactors                                                     | 8/77  | 1        |
| 3.5      | Standard Format and Content of License Applications for Uranium Mills                                                                    | 11/77 | 1        |
| 3.6      | Guide to Content of Technical Specifications for Fuel Reprocessing Plants                                                                | 4/73  |          |
| 3.7      | Monitoring of Combustible Gases and Vapors in Plutonium Processing and Fuel Fabrication Plants                                           | 3/73  |          |
| 3.8      | Preparation of Environmental Reports for Uranium Mills<br><i>(Comments requested by 11/24/78)</i>                                        | 9/78  | 1        |
| 3.9      | Concrete Radiation Shields                                                                                                               | 6/73  |          |
| 3.10     | Liquid Waste Treatment System Design Guide for Plutonium Processing and Fuel Fabrication Plants                                          | 6/73  |          |
| 3.11     | Design, Construction, and Inspection of Embankment Retention Systems for Uranium Mills                                                   | 12/77 | 2        |
| ➤ 3.11.1 | Operational Inspection and Surveillance of Embankment Retention Systems for Uranium Mill Tailings <i>(comments requested by 6/22/79)</i> | 11/80 | 1        |
| 3.12     | General Design Guide for Ventilation Systems of Plutonium Processing and Fuel Fabrication Plants                                         | 8/73  |          |
| 3.13     | Guide for Acceptable Waste Storage Methods at UF <sub>6</sub> Production Plants                                                          | 11/73 |          |
| 3.14     | Seismic Design Classification for Plutonium Processing and Fuel Fabrication Plants                                                       | 10/73 |          |
| 3.15     | Standard Format and Content of License Applications for Storage Only of Unirradiated Reactor Fuel and Associated Radioactive Material    | 10/73 |          |
| 3.16     | General Fire Protection Guide for Plutonium Processing and Fuel Fabrication Plants                                                       | 1/74  |          |
| 3.17     | Earthquake Instrumentation for Fuel Reprocessing Plants                                                                                  | 2/74  |          |
| 3.18     | Confinement Barriers and Systems for Fuel Reprocessing Plants                                                                            | 2/74  |          |
| 3.19     | Reporting of Operating Information for Fuel Reprocessing Plants                                                                          | 2/74  |          |



## REGULATORY GUIDES

| Number | Title                                                                                                                                                                    | Date                 | Revision |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------|
| 3.20   | Process Offgas Systems for Fuel Reprocessing Plants                                                                                                                      | 2/74                 |          |
| 3.21   | Quality Assurance Requirements for Protective Coatings Applied to Fuel Reprocessing Plants and to Plutonium Processing and Fuel Fabrication Plants                       | 3/74                 |          |
| 3.22   | Periodic Testing of Fuel Reprocessing Plant Protection System Actuation Functions                                                                                        | 6/74                 |          |
| 3.23   | Stabilization of Uranium-Thorium Milling Waste Retention Systems                                                                                                         | (withdrawn 10/22/80) |          |
| 3.24   | Guidance on the License Application, Siting, Design, and Plant Protection for an Independent Spent Fuel Storage Installation                                             | 12/74                |          |
| 3.25   | Standard Format and Content of Safety Analysis Reports for Uranium Enrichment Facilities                                                                                 | 12/74                |          |
| 3.26   | Standard Format and Content of Safety Analysis Reports for Fuel Reprocessing Plants                                                                                      | 2/75                 |          |
| 3.27   | Nondestructive Examination of Welds in the Liners of Concrete Barriers in Fuel Reprocessing Plants                                                                       | 6/77                 | 1        |
| 3.28   | Welder Qualification for Welding in Areas of Limited Accessibility in Fuel Reprocessing Plants and in Plutonium Processing and Fuel Fabrication Plants                   | 5/75                 |          |
| 3.29   | Preheat and Interpass Temperature Control for the Welding of Low-Alloy Steel for Use in Fuel Reprocessing Plants and in Plutonium Processing and Fuel Fabrication Plants | 5/75                 |          |
| 3.30   | Selection, Application, and Inspection of Protective Coatings (Paints) for Fuel Reprocessing Plants                                                                      | 6/75                 |          |
| 3.31   | Emergency Water Supply Systems for Fuel Reprocessing Plants                                                                                                              | 9/75                 |          |
| 3.32   | General Design Guide for Ventilation Systems for Fuel Reprocessing Plants                                                                                                | 9/75                 |          |
| 3.33   | Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Fuel Reprocessing Plant                                   | 4/77                 |          |
| 3.34   | Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Uranium Fuel Fabrication Plant                            | 8/16                 | 1        |
| 3.35   | Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Plutonium Processing and Fuel Fabrication Plant           | 8/16                 | 1        |
| †3.36  | Nondestructive Examination of Tubular Products for Use in Fuel Reprocessing Plants and in Plutonium Processing and Fuel Fabrication Plants                               | (withdrawn 2/1/79)   |          |

† Available at the NRC Public Document Room, 1717 H Street, N.W., Washington, D.C.

## REGULATORY GUIDES

| Number | Title                                                                                                                                   | Date  | Revision |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------|-------|----------|
| 3.37   | Guidance for Avoiding Intergranular Corrosion and Stress Corrosion in Austenitic Stainless Steel Components of Fuel Reprocessing Plants | 9/75  |          |
| 3.38   | General Fire Protection Guide for Fuel Reprocessing Plants                                                                              | 6/76  |          |
| 3.39   | Standard Format and Content of License Applications for Plutonium Processing and Fuel Fabrication Plants                                | 1/76  |          |
| 3.40   | Design Basis Floods for Fuel Reprocessing Plants and for Plutonium Processing and Fuel Fabrication Plants                               | 1/78  | 1        |
| 3.41   | Validation of Calculational Methods for Nuclear Criticality Safety                                                                      | 5/77  | 1        |
| 3.42   | Emergency Planning for Fuel Cycle Facilities and Plants Licensed Under 10 CFR Parts 50 and 70                                           | 9/79  | 1        |
| 3.43   | Nuclear Criticality Safety in the Storage of Fissile Materials                                                                          | 4/79  | 1        |
| ➤ 3.44 | Standard Format and Content for the Safety Analysis Report for an Independent Spent Fuel Storage Installation (Water Basin Type)        | 12/80 | 1        |
| ➤ 3.45 | Nuclear Criticality Safety for Pipe Intersections Containing Aqueous Solutions of Enriched Uranyl Nitrate                               | 11/80 |          |

## REGULATORY GUIDES

### DIVISION 4 REGULATORY GUIDES ENVIRONMENTAL AND SITING GUIDES

| Number | Title                                                                                                                                                                        | Date                 | Revision |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------|
| 4.1    | Programs for Monitoring Radioactivity in the Environs of Nuclear Power Plants                                                                                                | 4/75                 | 1        |
| 4.2    | Preparation of Environmental Reports for Nuclear Power Stations                                                                                                              | 8/76                 | 2        |
| †4.3   | Measurements of Radionuclides in the Environment—Analysis of I-131 in Milk                                                                                                   | (withdrawn 12/9/76)  |          |
| 4.4    | Reporting Procedures for Mathematical Models Selected to Predict Heated Effluent Dispersion in Natural Water Bodies                                                          | 5/74                 |          |
| 4.5    | Measurements of Radionuclides in the Environment—Sampling and Analysis of Plutonium in Soil                                                                                  | 5/74                 |          |
| 4.6    | Measurements of Radionuclides in the Environment—Strontium-89 and Strontium-90 Analysis                                                                                      | 5/74                 |          |
| 4.7    | General Site Suitability Criteria for Nuclear Power Stations                                                                                                                 | 11/75                | 1        |
| 4.8    | Environmental Technical Specifications for Nuclear Power Plants                                                                                                              | 12/75                |          |
| 4.9    | Preparation of Environmental Reports for Commercial Uranium Enrichment Facilities                                                                                            | 10/75                | 1        |
| †4.10  | Irreversible and Irrecoverable Commitments of Material Resources                                                                                                             | (withdrawn 11/17/77) |          |
| 4.11   | Terrestrial Environmental Studies for Nuclear Power Stations                                                                                                                 | 9/77                 | 1        |
| 4.12   | [Not yet published]                                                                                                                                                          |                      |          |
| 4.13   | Performance, Testing, and Procedural Specifications for Thermoluminescence Dosimetry: Environmental Applications                                                             | 8/77                 | 1        |
| 4.14   | Radiological Effluent and Environmental Monitoring at Uranium Mills                                                                                                          | 5/80                 | 1        |
| 4.15   | Quality Assurance for Radiological Monitoring Programs (Normal Operations)—Effluent Streams and the Environment                                                              | 2/79                 | 1        |
| 4.16   | Measuring, Evaluating, and Reporting Radioactivity in Releases of Radioactive Materials in Liquid and Airborne Effluents from Nuclear Fuel Processing and Fabrication Plants | 3/78                 |          |

† Available at the NRC Public Document Room, 1717 H Street, N.W., Washington, D.C.

## PART 1 • STATEMENTS OF CONSIDERATION

10 CFR Parts 1, 2, 20, 30, 40, 50, 70, 73, 140, 150

45 FR 80270  
Published 12/4/80  
Effective 12/4/80

### Minor and Clarifying Amendments

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The amendments make changes in names and definitions to reflect the transfer of functions from the Energy Research and Development Administration to the Department of Energy made by the Department of Energy Organization Act.

**EFFECTIVE DATE:** The amendments are effective on March 5, 1980.

**FOR FURTHER INFORMATION CONTACT:** Royal J. Voegeli, Office of the Executive Legal Director, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, telephone (301) 492-8693.

**SUPPLEMENTARY INFORMATION:** Pursuant to section 301(a) of the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565 at 577-578, 42 U.S.C. 7151), the functions of the Energy Research and Development Administration were transferred to the Department of Energy on August 4, 1977. To reflect that transfer, the amendments substitute "Department of Energy", "Department" and "DOE" for "Energy Research and Development Administration", "Administration" and "EDRA" wherever they appear in Chapter I. The amendments also define the Department of Energy for purposes of NRC regulations as meaning the Department of Energy to the extent that the Department, or its duly authorized representatives, exercise the EDRA functions transferred to it by the Department of Energy Organization Act.

Because these amendments relate solely to minor matters, it has been found that good cause exists for omitting notice of proposed rule making, and public procedures thereon, as unnecessary, and for making the amendments effective upon publication in the **Federal Register**.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Parts 1, 2, 20, 30, 40, 50, 70, 73, 140 and 150 are published as a document subject to codification.

### 10 CFR Part 1

#### Title Change for Adjudicatory Panel Members

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission has revised its regulations to provide new titles for the members of the Atomic Safety and Licensing Board Panel and the Atomic Safety and Licensing Appeal Panel. Instead of being referred to as a panel "Member" those individuals have been given the title "Administrative Judge".

**EFFECTIVE DATE:** December 4, 1980.

**FOR FURTHER INFORMATION CONTACT:** Trip Rothschild, Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (202-634-1465).

**SUPPLEMENTARY INFORMATION:** The Nuclear Regulatory Commission has amended its regulations to provide that members of the Atomic Safety and Licensing Board Panel and the Atomic Safety and Licensing Appeal Panel shall have the title "Administrative Judge." This change is part of the Commission's ongoing program to improve the quality and prestige of its adjudicatory panels. This nomenclature change also more accurately describes the work and functions of the panel members.

Since this amendment relates to internal NRC organization, good cause exists for making this rule immediately effective without seeking public comment.

Pursuant to section 2201(p) of Title 42 of the United States Code, and sections 552 and 553 of Title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Part 1, are published as a document subject to codification, to be effective December 4, 1980.





## PART 30 • STATEMENTS OF CONSIDERATION

44 FR 30076  
Published 5/24/79  
Effective 6/5/79

### 10 CFR Parts 30, 40, and 70

#### Domestic Licensing; Timely Notification of Discontinued Licensed Activities

**AGENCY:** U.S. Nuclear Regulatory Commission (NRC).

**ACTION:** Approval of reporting requirement by Comptroller General.

**SUMMARY:** On March 22, 1979, the Nuclear Regulatory Commission published in the Federal Register a notice of rule making, effective June 5, 1979 amending its regulations to require licensees to notify the Commission when they decide to permanently discontinue all activities involving materials authorized under a license.

The notice included the following note:

**Note.**—The Nuclear Regulatory Commission has submitted this rule to the Comptroller General for review under the Federal Reports Act, as amended, 44 U.S.C. 3512. The date on which the rule becomes effective, unless advised to the contrary, accordingly reflects inclusion of the 45 day period which that statute allows for this review (44 U.S.C. 3512(c)(2)).

**EFFECTIVE DATE:** June 5, 1979. The reporting requirements set out in the notice of rule making amending 10 CFR Parts 30, 40, and 70 which was published in the Federal Register on March 22, 1979 (44 FR 17479) have been approved or cleared by the U.S. General Accounting Office.

**FOR FURTHER INFORMATION CONTACT:** Gerald L. Hutton, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, telephone 301-492-7086.

45FR14199  
Published 3/5/80  
Effective 3/5/80

Minor and Clarifying Amendments

See Part 1 Statements of Consideration

45 FR 18905  
Published 3/24/80  
Effective 3/24/80

Deletion of Reference to Panama Canal Zone; Minor Amendments

See Part 4 Statements of Consideration.

45 FR 41393  
Published 6/19/80  
Effective 9/2/80

### 10 CFR Parts 30 and 35

#### Testing of Radioisotope Generators

**AGENCY:** Nuclear Regulatory Commission (NRC).

**ACTION:** Final rule.

**SUMMARY:** Certain Nuclear Regulatory Commission (NRC) medical licensees are authorized to prepare radioactive drugs from radioisotope generators. NRC is requiring licensees to test these radioactive drugs for a contaminant called molybdenum-99. NRC is also imposing maximum limits for molybdenum-99 in these radioactive drugs. Following a report from an NRC medical licensee, a joint NRC/FDA investigation revealed the possibility of greater than normal quantities of molybdenum-99 in technetium-99m (Tc-99m) generator eluate. The presence of molybdenum-99 serves no diagnostic purpose. Therefore, the radiation exposure from the administration of greater than normal amounts of molybdenum-99 is unnecessary to the patient.

**EFFECTIVE DATE:** September 2, 1980.

**Note.**—NRC has submitted this rule to the Comptroller General for review under the Federal Reports Act, as amended, 44 U.S.C. 3512. The date on which the rule becomes effective reflects inclusion of the 45-day period that the statute allows for this review (44 U.S.C. 3512(c)(2)).

**FOR FURTHER INFORMATION CONTACT:** Edward Podolak, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Telephone: 301-443-5860).

**SUPPLEMENTARY INFORMATION:** In diagnostic nuclear medicine, the most widely used radioactive drug is technetium-99m (Tc-99m) which has a radioactive half-life of 6 hours. Many hospitals and nuclear pharmacies obtain their Tc-99m by purchasing a radionuclide generator from a radioactive drug manufacturer and eluting the generator.

The radioisotope generator is a shielded device that is often called a

molybdenum generator or molybdenum "cow" because molybdenum-99 (Mo-99), the parent of Tc-99m, is contained within the generator. The Mo-99 is adsorbed on an alumina column which is arranged so that sterile saline solution can be fed through the column to wash out, or elute, only the daughter radioisotope, Tc-99m. The parent, Mo-99, has a longer half-life than the daughter, Tc-99m, and the parent continuously decays to form the daughter radioisotope, which is eluted when needed. The generator is usually eluted, or "milked," every 24 hours and replaced with a new generator once a week because the parent, Mo-99, has decayed below useful levels. If the Mo-99 is improperly loaded on the alumina column or loaded on an alumina column that is defective (e.g., improper packing could cause "channeling" of the Mo-99), the Mo-99 will "break through" the column and contaminate the radioactive drug.

The United States Pharmacopeia (USP) XIX, which is recognized by the Food and Drug Administration (FDA) and the pharmaceutical industry as the basic standard for drug strength, quality and purity, has upper limits for the presence of Mo-99 in Tc-99m radioactive drugs. These limits apply to molybdenum generator manufacturers and each generator's labeling includes methods or references methods for quantifying the amount of Mo-99 in Tc-99m. This is usually called a molybdenum breakthrough test.

Molybdenum breakthrough testing by the generator user has always been considered a good laboratory practice or a good quality control measure. In a section describing molybdenum breakthrough testing, the Bureau of Radiological Health (FDA) "Workshop Manual on Radiopharmaceutical Quality Assurance" (July 1978) states: "Thus, it is important that testing for Mo-99 be performed routinely."

Until 1975, all NRC medical licenses authorizing the use of generators included a license condition requiring molybdenum breakthrough testing. A provision in the new § 35.14 group medical licensing regulations, adopted in 1975, ultimately had the effect of dropping this license condition. Section 35.14(b)(4) requires licensees to follow the generator labeling or package inserts which, in 1975, included methods for molybdenum breakthrough testing. Over the intervening years, generator labeling has become ambiguous on molybdenum breakthrough testing. Some package inserts imply that the users *should* do it, others imply that the users *are* doing it, and still others *recommend* that the users do it. Thus, there are no uniform requirements in NRC licenses or

## PART 30 • STATEMENTS OF CONSIDERATION

regulations or in connection with the generator labeling for the performance of tests to determine the amount of Mo-99 in Tc-99m radioactive drugs before administration to patients.

Following a report from an NRC medical licensee, a joint NRC/FDA investigation in March 1979 revealed the possibility of greater than normal quantities of Mo-99 in Tc-99m generator eluate. The presence of molybdenum-99 serves no diagnostic purpose. Therefore, the radiation exposure resulting from the administration of greater than normal amounts of Mo-99 is unnecessary radiation exposure to patients. It could result in a radiation dose to a critical organ of one or more rems. There are several thousand generators shipped weekly, with each generator accounting for up to 50 patient dosages per day. If a problem develops in the manufacture, shipping, handling or elution of these generators that results in molybdenum breakthrough in excess of the USP XIX limits, there is a potential for unnecessary radiation exposure of patients.

In view of this, on March 12, 1979, NRC's Office of Nuclear Materials Safety and Safeguards issued an order requiring medical licensees to perform molybdenum breakthrough testing on each elution of Tc-99m from a generator and also prohibiting licensees from administering any Tc-99m radioactive drugs that exceed the USP XIX limits for Mo-99 contamination. On June 6, 1979, the Commission published in the *Federal Register* (44 FR 32394) a proposed rule that contained the essentials of that order. The March 12, 1979, order to licensees requiring molybdenum breakthrough testing remained in effect. That order is hereby rescinded by the terms of this final rule when it becomes effective.

The comment period for the proposed rule expired on August 6, 1979. Three comments were received. Two commenters favored the proposed rule. One of these commenters suggested a minor word change to clarify that the required test applies only to Mo-99/Tc-99m generators. This change was

adopted in the final rule. One commenter, while agreeing that molybdenum breakthrough testing was necessary, suggested that the FDA change the generator labeling to mandate the test. The NRC believes that an NRC requirement for molybdenum breakthrough testing is more direct and effective than an FDA labeling change. FDA does not impose requirements on users of radioactive drugs through the product labeling.

The final rule covers three types of NRC medical licenses: (1) the nuclear

pharmacy license, (2) the broad medical license and (3) the group medical license. Of these three types of medical licensees, the rule applies only to those who actually elute the radioisotope generators and does not apply to those who purchase prepared Tc-99m radioactive drugs from a radiopharmaceutical manufacturer or nuclear pharmacy. The manufacturer that sells prepared Tc-99m radiopharmaceuticals is covered by FDA requirements for molybdenum breakthrough testing. As noted above, nuclear pharmacies are covered by the rule.

In summary, § 35.14(b)(4) requires the group medical licensees to perform molybdenum breakthrough tests if they use generators. Section 30.34(g) requires nuclear pharmacy licensees and broad medical licensees to perform the same molybdenum breakthrough tests if they use generators.

Under the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Parts 30 and 35 are published as a document subject to codification.

45 FR 65521

Published 10/3/80

➤ Effective 11/17/80 \*

### 10 CFR Parts, 30, 40, 70, and 150

#### Uranium Mill Licensing Requirements

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rules.

**SUMMARY:** The U.S. Nuclear Regulatory Commission is amending its regulations to specify licensing requirements for uranium and thorium milling activities, including tailings and wastes generated from these activities. The amendments to Parts 40 and 150 take into account the conclusions reached in a final generic environmental impact statement on uranium milling<sup>1</sup> and the requirements mandated in the Uranium Mill Tailings Radiation Control Act of 1978, as

<sup>1</sup> Copies of the final generic environmental impact statement on uranium milling (NUREG-0706) are available for public inspection and copying at the U.S. Nuclear Regulatory Commission's Public Document Room, 1717 H St NW., Washington, D.C. 20555. Copies also available from GPO Sales Program, Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 and the National Technical Information Service, Springfield, Virginia 22161.

\* Effective date amended 45 FR 79409  
See Statements of Consideration 12/1/80

amended, public comments received on a draft generic environmental impact statement on uranium milling,<sup>2</sup> and public comments received on proposed rules published in the *Federal Register*. The amendments to 10 CFR Part 40 specify technical, surety, ownership, and long term care criteria for the management and final disposition of mill tailings. The amendments to 10 CFR Parts 30 and 70 are for consistency to require the completion of an environmental review by the NRC prior to the commencement of construction of certain other types of nuclear plants, such as uranium hexafluoride conversion plants or uranium processing and fuel fabrication plants. The amendments to 10 CFR Part 150 enumerate the authorities reserved to the Commission in Agreement States under the provisions of the Uranium Mill Tailings Radiation Control Act, and specify requirements for Agreement States to implement this Act.

**EFFECTIVE DATE:** November 17, 1980.

**Note.**—The NRC has submitted this rule to the Comptroller General for such reviews as may be appropriate under the Federal Reports Act, as amended, 44 U.S.C. 3512. The date on which the reporting and recordkeeping requirements of this rule become effective, unless advised to the contrary, accordingly reflects inclusion of the 45 day period which that statute allows for such review (44 U.S.C. 3512(c)(2)).

**FOR FURTHER INFORMATION CONTACT:** Mr. Don F. Harmon, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301-443-5910).

#### SUPPLEMENTARY INFORMATION:

##### I. Introduction

In November 1978, the U.S. Congress enacted the Uranium Mill Tailings Radiation Control Act (UMTRCA). This Act provides a program to regulate mill tailings during uranium or thorium oreprocessing at active mill operations and after termination of operations to stabilize and control tailings in a safe and environmentally sound manner and to minimize or eliminate radiation health hazards to the public. In April 1979, the NRC published (44 FR 24963) for comment a draft generic environmental impact statement (GEIS) on uranium milling that assessed the potential environmental impacts of uranium milling operations, including the management of uranium mill tailings. The NRC wished to provide an opportunity for public participation in decisions concerning any proposed changes in NRC regulations based on that assessment.

On August 24, 1979, the Commission published in the *Federal Register*

<sup>2</sup> The draft statement (NUREG-0511) was published in April 1979 (44 FR 24963).

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reasonably achievable as specified in the standards of the new appendix. This is also required in order to meet the EPA standards in 40 CFR 190 which must be enforced by the Commission and Agreement States by December, 1980. Therefore, it is essential that licensing action be taken now to ensure interim tailings management programs which deal with presently occurring impacts such as blowing tailings and uncontrolled seepage are worked out on an immediate basis even before complete disposal programs can be finalized.

### V. Future Actions

The UMTRCA establishes certain responsibilities and authorities whereby the Environmental Protection Agency (EPA) must develop standards of general application for the protection of the public health, safety, and the environment from radiological and nonradiological hazards associated with the processing and with the possession, transfer, and disposal of byproduct materials. These generally applicable standards for nonradiological hazards must provide for the protection of human health and the environment consistent with the standards required under subtitle C of the Solid Waste Disposal Act, as amended. The Commission and any State permitted to exercise authority under § 274b(2) of the Atomic Energy Act must apply these standards of general application in licensing actions involving byproduct material.

The EPA has not, as yet, proposed the standards described above. It is the Commission's understanding, based on NRC and EPA staff discussions, that these standards will probably not be proposed before 1981. Upon finalization of the EPA standards, it is likely that minor changes will be required in the Commission's regulations. However, to delay issuance of the rules set forth below until the final EPA standards have been issued will, in all probability, preclude sufficient time for applicable Agreement States to adopt standards which are equivalent to or more stringent than those of the Commission's by November 8, 1981, in order to meet the requirements in the UMTRCA.

### VI. Regulatory Changes

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, the Uranium Mill Tailings Radiation Control Act of 1978, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendments to Title 10, Code of Federal Regulations, Parts 30, 40, 70, and 150 are published as a document subject to codification.

➤45 FR 79409  
Published 12/1/80  
Effective 12/1/80

### 10 CFR Parts 30, 40, 70, and 150

#### Uranium Mill Licensing Requirements: Change of Effective Date for Reporting and Recordkeeping Requirements

**AGENCY:** Nuclear Regulatory  
Commission.

**ACTION:** Final rule; extension of effective  
date.

**SUMMARY:** The Nuclear Regulatory Commission is extending from November 17, 1980, to January 5, 1981, the effective date for the reporting and recordkeeping requirements contained in a final rule establishing Uranium Mill Licensing Requirements which was published as FR Doc. 80-30597 appearing at page 85521 on October 3, 1980. This extension of the effective date for the reporting and recordkeeping requirements contained in the rule is made in order to allow additional time for completion of the review of those requirements by the General Accounting Office.

**EFFECTIVE DATE:** December 1, 1980.

#### FOR FURTHER INFORMATION CONTACT:

Mr. Don Harmon, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Phone: 301-443-5910).

**SUPPLEMENTARY INFORMATION:** In a final rule published in the Federal Register on October 3, 1980 (45 FR 85521) the NRC published Uranium Mill Licensing Requirements. That rule was to become effective on November 17, 1980. In order to allow additional time for the Comptroller General's review conducted under the Federal Reports Act, as amended, 44 U.S.C. 3512, the effective date for the reporting and recordkeeping requirements contained in the rule, unless advised to the contrary, is extended to January 5, 1981. The effective date for all of the other regulatory requirements contained in the rule remains unchanged.

Since the amendment relates solely to a minor procedural matter, notice of proposed rulemaking and public procedure thereon are unnecessary, and good cause exists to make the amendments effective December 1, 1980.





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requirement of Pub. L. 96-106, there is a need to revoke certain of the immediately effective rules (viz., §§ 40.2a, 40.28(b)(2), and 150.15(a)(7)) which were published in the August 24 Federal Register notice (44 FR 50012).

It should be noted, however, that the effective regulations granting a general license for possession of such byproduct material to NRC licensees in non-Agreement States are not revoked. These regulations remain necessary to prevent licensees from being in technical violation of UMTRCA's requirements concerning byproduct material licenses from the NRC.

The Commission finds that because the §§ 40.2a, 40.28(b)(2), and 150.15(a)(7) are in conflict with the requirements of Pub. L. 96-106, they must be revoked immediately. Because these regulations no longer have any basis in law, good cause exists pursuant to 5 U.S.C. 553 to waive the 30-day comment period, as impracticable and contrary to the public interest, and make the following amendments immediately effective.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, the Uranium Mill Tailings Radiation Control Act of 1978, as amended by the Surface Transportation Assistance Act of 1978 (Pub. L. 96-106), and sections 552 and 553 of Title 5 of the United States Code, the following amendments to Title 10, Parts 40 and 150, Code of Federal Regulations, are published as a document subject to codification.

45FR14199

Published 3/5/80

Effective 3/5/80

*Minor and Clarifying Amendments*

See Part 1 Statements of Consideration

45 FR 18905

Published 3/24/80

Effective 3/24/80

*Deletion of Reference to Panama Canal Zone; Minor Amendments*

See Part 4 Statements of Consideration.

45 FR 50705

Published 7/31/80

Effective 7/31/80

*Safeguards on Nuclear Material-Implementation of US/JAEA Agreement*

See Part 75 Statements of Consideration.

45 FR 55419

Published 8/20/80

Effective 9/19/80

### 10 CFR Part 40

#### Deletion of Source Material Medicinals From the General License for Small Quantities of Source Material

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is amending its licensing regulations by deleting the provision for general license authorization of the use of source material<sup>1</sup> in humans by physicians, pharmacists, and other persons receiving source material in the form of medicinals or drugs. Thorotrast, containing alpha-emitting thorium-232 dioxide, was the only source material medicinal used in humans. However, as the radiobiological hazards of alpha-emitting radionuclides became known, the product fell into disuse and production of Thorotrast was discontinued in 1965. This action will require authorization by means of an NRC specific license for internal or external administration of source material, or the radiation therefrom, to human beings.

**EFFECTIVE DATE:** September 19, 1980.

**FOR FURTHER INFORMATION CONTACT:** Deborah A. Bozik, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Telephone 301-443-5860).

#### **SUPPLEMENTARY INFORMATION:**

Thorotrast, authorized for use by the general license in § 40.22, "Small quantities of source material," of 10 CFR Part 40, and used as an X-ray contrast agent, has been the only source material utilized as a medicinal; no other thorium or uranium compounds have been used as source material medicinals. Thorotrast is the colloidal dioxide of thorium-232 which is an alpha-emitting radionuclide. As the radiobiological hazards of these radionuclides became apparent, the carcinogenic potential of Thorotrast became evident, and, in 1965, the production of Thorotrast was stopped. Improvements in X-ray machines and imaging techniques have resulted in Thorotrast being replaced with nonradioactive contrast agents. The Food and Drug Administration (FDA) terminated the approved New Drug Application (NDA) for Thorotrast on June 13, 1977.

NRC and FDA both strive for consistency with respect to each other's

<sup>1</sup> Source material, as defined in 10 CFR 40.4(h) means, among other things, uranium or thorium, or any combination thereof, in any physical or chemical form.

regulations. On March 6, 1980, NRC published a proposed rule (45 FR 14589) to amend the general license in § 40.22 by deleting the authorization for the

following persons to use and transfer small quantities of source material:

- (1) Pharmacists using source material solely for compounding medicinals;
- (2) Physicians using source material for medicinal purposes; and
- (3) Persons receiving possession of source material from pharmacists and physicians in the form of medicinals or drugs.

Under the proposed rule, the following groups would still retain their authorization under this general license to use small quantities of source material for research, development, educational, commercial or operational purposes:

- (1) Commercial and industrial firms;
- (2) Research, educational and medical institutions; and
- (3) Federal, State and local government agencies.

A new paragraph would be added under the proposed rule to the general license in § 40.22 of 10 CFR Part 40 which would prohibit licensees from administering source material, or the radiation therefrom, either internally or externally, to human beings, except where authorized by an NRC specific license.

The public was invited to submit written comments on the proposed rule by May 6, 1980. Eight comments were received, and all supported the proposed amendment. One commenter qualified his support by inquiring if the people whose authorization is being withdrawn by this amendment have been making other use of source material. To the best of the Commission's knowledge, no one in the affected groups has been using source material since Thorotrast production was discontinued in 1965. Therefore, the Commission is adopting the final rule in the form identical to the proposed amendment.

Under the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendment to Title 10, Chapter I, Code of Federal Regulations, Part 40 is published as a document subject to codification.

45 FR 65521

Published 10/3/80

Effective 11/17/80

*Uranium Mill Licensing Requirements*

See Part 30 Statements of Consideration

## **PART 40 • STATEMENTS OF CONSIDERATION**

➤ 45 FR 79409  
Published 12/1/80  
Effective 12/1/80

*Uranium Mill Licensing Requirements:  
Change of Effective Date for Reporting  
and Recordkeeping Requirements*

**See Part 30 Statements of Consideration**

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reasons exist for reactor operation. Finally, pursuant to 10 CFR 2.202(f), the Commission may, in appropriate circumstances, make the order immediately effective, which could result in immediate plant shutdown subject to a later hearing.

### IX. Funding

In view of the requirements in these rule changes regarding the actions to be taken in the event State and local government planning and preparedness are or become inadequate, a utility may have an incentive, based on its own self interest as well as its responsibility to provide power, to assist in providing manpower, items of equipment, or other resources that the State and local governments may need but are themselves unable to provide. The Commission believes that in view of the President's Statement of December 7, 1979, giving FEMA the lead role in offsite planning and preparedness, the question of whether the NRC should or could require a utility to contribute to the expenses incurred by State and local governments in upgrading and maintaining their emergency planning and preparedness (and if it is to be required, the mechanics for doing so) is beyond the scope of the present rule change. It should be noted, however, that any direct funding of State or local governments solely for emergency preparedness purposes by the Federal government would come through FEMA.

### X. Exercises

On an annual basis, all commercial nuclear power facilities will be required by NRC to exercise their plans; these exercises should involve exercising the appropriate local government plans in support of these facilities. The State may choose to limit its participation in exercises at facilities other than the facility (site) chosen for the annual exercise(s) of the State plan.

Each State and appropriate local government shall annually conduct an exercise jointly with a commercial nuclear power facility. However, States with more than one facility (site) shall schedule exercises such that each individual facility (site) is exercised in conjunction with the State and appropriate local government plans not less than once every 3 years for sites with the plume exposure pathway EPZ partially or wholly within the State, and not less than once every 5 years for sites with the ingestion exposure pathway EPZ partially or wholly within the State. The State shall choose, on a rotational basis, the site(s) at which the required annual exercise(s) is to be conducted; priority shall be given to new facilities

seeking an operating license from NRC that have not had an exercise involving the State plan at that facility site.

The Commission has determined under the criteria in 10 CFR Part 51 that an environmental impact statement for the amendments to 10 CFR Part 50 and Appendix E thereof is not required. This determination is based on "Environmental Assessment for Final Changes to 10 CFR Part 50 and Appendix E of 10 CFR Part 50, Emergency Planning Requirements for Nuclear Power Plants" (NUREG-0685, June 1980). Comments on the "Draft Negative Declaration: Finding of No Significant Impact" (45 FR 3913, January 21, 1980) were considered in the preparation of NUREG-0685.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that the following amendments to Title 10, Chapter I, Code of Federal Regulations, Parts 50 and 70, are published as a document subject to codification.

45 FR 62789

Published 9/22/80

Effective 10/22/80

### 10 CFR Part 50

#### Domestic Licensing of Production and Utilization Facilities; Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is amending the portion of one of its regulations that provides requirements for leak testing of containment building air locks in order to permit greater flexibility for such testing in the case of frequent use of the air locks.

**EFFECTIVE DATE:** October 22, 1980.

**FOR FURTHER INFORMATION CONTACT:** E. G. Arndt, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, DC 20555 (301-443-5997).

**SUPPLEMENTARY INFORMATION:** On January, 11, 1980, the Nuclear Regulatory Commission published in the Federal Register (45 FR 2330) a proposed amendment to its regulation 10 CFR Part 50, "Licensing of Production and Utilization Facilities" which would amend Appendix J, "Primary Reactor

Containment Leakage Testing for Water-Cooled Reactors," with regard to Type B testing requirements. Interested persons were invited to submit written comments by February 25, 1980. Three sets of comments were received. After consideration of the comments received and other factors involved, the Commission has adopted the amendment to Appendix J, 10 CFR Part 50, as published for public comment.

Copies of the comments, an abstract of comments containing staff responses, and the value/impact analysis supporting the rule, are available for public inspection at the Commission's Public Document Room at 1717 H Street, NW., Washington, DC. Single copies may be obtained on request from the Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: E. G. Arndt.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553, title 5 of the United States Code, the following amendment to 10 CFR Part 50 is published as a document subject to codification.

45 FR 71569

Published 10/29/80

Effective 10/29/80

### 10 CFR Part 50

#### Fire Protection Schedules for Operating Nuclear Power Plants

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is amending its regulations to temporarily suspend completion schedules for certain fire protection features in operating nuclear plants pending completion of its ongoing comprehensive fire protection rulemaking. This suspension is necessary because some NRC licensees are unable to meet fire protection implementation deadlines contained in licensed conditions. The Commission has found that fire protection measures already implemented give reasonable assurance of safety, and that no health and safety interest would be served by forcing certain licensees to shut down during the brief period between the license condition deadlines and the effectiveness of the final fire protection rule.

**EFFECTIVE DATE:** October 29, 1980.



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**FOR FURTHER INFORMATION CONTACT:** William Shields, Office of Executive Legal Director, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, phone 301-492-8696.

**SUPPLEMENTARY INFORMATION:** On May 29, 1980, the Commission published in the *Federal Register* (45 FR 38082) a Notice of Proposed Rulemaking entitled "Fire Protection Program for Nuclear Plants Operating Prior to January 1, 1979." The proposed rule provided that all fire protection modifications except alternate or dedicated shutdown capability would be required to be implemented by November 1, 1980, unless the Commission approve an extension for good cause. This deadline was also stated in the Commission's May 27, 1980 Memorandum and Order on the Union of Concerned Scientists Petition for Emergency and Remedial Action. 11 NRC 707, 719.

Many of the commenters on the proposed rule contended that the November 1 deadline was unachievable. Moreover, much more time than was earlier anticipated has been required to prepare a final rule on fire protection. Although the final rule is near completion, and will incorporate an implementation schedule different from that in the proposed rule, it has not yet been published and in any event would not be effective until 90 days after publication.

Certain NRC licensees, however, are at present operating under license conditions or technical specifications thereto which include the November 1 deadline or other dates which will precede the effective date of the final rule. To the extent that these licensees have been unable to complete all of the fire protection measures to which these deadlines apply, continued operation would violate the license conditions. The violation would extend only until the final rule becomes effective, since the implementation schedule contained in the final rule will supersede inconsistent license conditions.

The Commission has determined, based upon a review of the entire record in this rulemaking, that relief from these license conditions is appropriate pending promulgation of the final rule on fire protection applicable to all NRC licensees. Extensive fire protection measures have already been implemented at all operating plants. The implementation schedule of the final rule will be uniform and comprehensive, and will apply to all operating plants including those with different schedules contained in license conditions. No public health and safety interest would be served by forcing only those licensees unable to meet deadlines preceding the effectiveness of the final

rule to shut down for the brief interim. To the contrary, the fire protection measures already implemented give reasonable assurance that all operating nuclear plants may continue to operate safely even though the final rule will require additional fire protection measures at many plants.

The Administrative Procedure Act provides that a rule may be effective upon publication when that rule "grants or recognizes an exception or relieves a restriction." 5 U.S.C. 553(d)(1). This rule relieves certain NRC licensees from license conditions or technical specifications thereto in regard to fire protection implementation deadlines, and will therefore be effective upon the date of publication in the *Federal Register*. Furthermore, as noted above, the proposed rule stated that extensions from the November 1, deadline would be considered for good cause. Extensive public comment was received to the effect that the deadline was unrealistic and should be revised. Under these circumstances the Commission believes that there is good cause for an extension of the license condition schedules pending effectiveness of the final rule on fire protection.

The rule provides that all compliance dates contained in license conditions or technical specifications for required fire protection measures are suspended pending further action by the Commission. As is clear from the above discussion, that further action will be promulgation of the final rule on fire protection. The Commission intends that licensees affected by this rule should use best efforts to complete all required measures as soon as possible despite the suspension of the deadlines for this brief period.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that the following amendment to Title 10, Chapter I, Code of Federal Regulations, Part 50, is published as a document subject to codification.

45 FR 76602

Published 11/19/80

Effective 2/19/81

➤ Effective 2/17/81 •

### 10 CFR Part 50

#### Fire Protection Program for Operating Nuclear Power Plants

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is amending its regulations to require certain provisions for fire protection in operating nuclear power plants. This action is being taken to upgrade fire protection at nuclear power plants licensed to operate prior to January 1, 1979, by requiring resolution of certain contested generic issues in fire protection safety evaluation reports.

**EFFECTIVE DATE:** February 19, 1981.

**Note.**—The Nuclear Regulatory Commission has submitted this rule to the Comptroller General for review as may be appropriate under the Federal Reports Act, as amended (44 U.S.C. 3512). The date on which the reporting requirement of this rule becomes effective, unless advised to the contrary, reflects inclusion of the 45-day period that statute allows for such review (44 U.S.C. 3512(c)(2)).

**FOR FURTHER INFORMATION CONTACT:** David P. Ntley, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, phone 301-443-5921 or Robert L. Ferguson, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, phone 301-492-7096.

**SUPPLEMENTARY INFORMATION:** On May 29, 1980, the Nuclear Regulatory Commission published in the *Federal Register* (45 FR 38082) a notice of proposed rulemaking inviting written suggestions or comments on the proposed rule by June 30, 1980. The notice concerned proposed amendments to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," which would require certain minimum provisions for fire protection in nuclear power plants operating prior to January 1, 1979. Fifty-one comment letters were received regarding the proposed amendments. A number of comments pertained to specific requirements in the proposed Appendix R; and these will be dealt with below. However, there were three substantive contentions which were raised by many of the commenters. These three comments are summarized as follows:

1. Most commenters stated that the 30 day comment period was too short to permit adequate detailed response and

• Amended 45 FR 79409

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shutdown capability. The Commission does not agree. We believe that the Commission's overall fire protection program involving extensive plant-specific fire protection modifications that are based on guidance set forth in Branch Technical Position BTP APCS 9.5-1 and its Appendix A and the specific requirements of Appendix R to resolve disputed issues provide adequate fire protection.

One commenter stated that the ambiguity of the proposed regulation with regard to critical items requires that it be renoticed. The commenter referenced three portions of the proposed Appendix R as examples of such ambiguity. They were Section III.G, Section III.N, and Section III.Q. We have reviewed these examples.

In reference to the first example, the commenter stated that the first paragraph of Section III.G identifies alternative shutdown capability as an optional protective feature and that paragraph III.G.2.c then identifies alternative shutdown capability as a minimum fire protection feature. We do not agree with this statement. The first paragraph of Section III.G identifies alternative shutdown capability as one option in a combination of fire protection features for a specific fire area. Paragraph III.G.3 indicates when this option should be used.

In reference to the second example, the commenter stated that Section III.N requires a pressure differential across the test specimen during the testing of fire barrier penetration seals but fails to define the pressure differential. This comment is incorrect. The pressure differential called for by the proposed provision was the maximum pressure differential that the barrier would experience in the specific plant installation. In any event, the requirement for pressure differential during such testing has been deleted since only noncombustible material is now being used for such seals.

In reference to the third example, the commenter stated that Section III.Q is totally lacking in definition. We do not agree. Footnote 6 references Regulatory Guide 1.75 and IEEE Std 384-1974. The latter document is a commonly used industry standard that defines associated circuits and provides guidance for ensuring that such circuits do not compromise the independence of the shutdown circuits they are associated with.

Based on the above examples and our review of the other provisions of the proposed rule, we do not believe that the rule as proposed was ambiguous so as to require renoticing. Moreover, it should be noted that, based on other

comments received on the proposed regulations, other commenters demonstrated a thorough understanding of the proposed requirements.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that the following amendments to Title 10, Chapter I, Code of Federal Regulations, Part 50, are published as a document subject to codification.

45 FR 76968

Published 11/21/80

Effective 2/4/81

*Criteria and Procedures  
for Determining Eligibility  
for Access to or Control  
Over Special Nuclear Material*

See Part 11 Statements of Consideration

## PART 50 • STATEMENTS OF CONSIDERATION

➤ 45 FR 79409  
Published 12/1/80

### 10 CFR Part 50

#### Fire Protection Program for Operating Nuclear Power Plants

##### *Correction*

In FR Doc. 80-36175 appearing on page 76602 in the issue of Wednesday, November 19, 1980, the effective date now reading "February 19, 1981" should have read "February 17, 1981".

## **PART 70 • STATEMENTS OF CONSIDERATION**

➤ 45 FR 79409  
Published 12/1/80  
Effective 12/1/80

*Uranium Mill Licensing Requirements:  
Change of Effective Date for Reporting  
and Recordkeeping Requirements*

**See Part 30 Statements of Consideration**





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license for storage of spent fuel in an ISFSI; § 51.5(b)(5) for issuance of a renewal license for storage of spent fuel in an ISFSI; and § 51.5(b)(9) for issuance of an initial license for storage of spent fuel in an ISFSI on the site of a nuclear power reactor. These environmental impact assessments will include an evaluation of feasible alternatives. However, since the site selection process for an existing facility has already been completed, no comparative review of alternative sites will be required unless there is new information which could alter the original site evaluation findings. In practice, this means that alternative sites need not be reviewed and that the existing facility would be rejected for siting considerations only if the site involved found to be unsuitable with respect to either safety or environmental impact considerations.

An application for renewal of the license for the G.E.—Morris facility under 10 CFR Part 70 was received on February 27, 1979 and has been under review since that time. As 10 CFR Part 72 has become effective prior to completion of this licensing action, such licensing action will proceed pursuant to 10 CFR Part 72 which is specifically designed to cover spent fuel storage in an ISFSI. This is expected to result in some procedural delays in the G.E.—Morris proceedings.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following new Part 72 and related conforming amendments of Parts 51, 70, 73 and 150 to Chapter I of Title 10, of the Code of Federal Regulations are published as a document subject to codification.

45 FR 78623  
Published 11/26/80  
Effective 12/12/80

### 10 CFR Part 72

#### Licensing Requirements for the Storage of Spent Fuel in an Independent Fuel Spent Storage Installation; Correction

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Final rule; correction.

**SUMMARY:** In a Federal Register document published on November 12, 1980 (45 FR 74693), the NRC added a new Part 72 to its regulations to cover the specific licensing requirements for the storage of spent fuel in an independent spent fuel storage

Installation (ISFSI). The effective date was inadvertently printed as November 28, 1980. This document corrects the error and publishes the effective date of December 12, 1980.

**DATE:** Part 72 is effective December 12, 1980.

**FOR FURTHER INFORMATION CONTACT:** John D. Philips, Chief, Rules and Procedures, Office of Administration, Nuclear Regulatory Commission, Washington, DC 20555, (301) 492-7086.

➤ 45 FR 80271  
Published 12/4/80

### 10 CFR Parts 72, 73, and 150

#### Licensing Requirements for the Storage of Spent Fuel in an Independent Spent Fuel Storage Installation; Correction

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Final rule; correction.

**SUMMARY:** This document corrects a final rule establishing Licensing Requirements for the Storage of Spent Fuel in an Independent Spent Fuel Storage Installation published in the Federal Register on November 12, 1980 (45 FR 74693). The action is necessary to correct typographical errors.

**FOR FURTHER INFORMATION CONTACT:** Dennis W. Reisenweaver, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, DC 20555 (Phone 301-443-5910).

The following corrections are made in FR Doc. 80-34865 beginning on page 74693 on November 12, 1980.

100-100000  
100-100000  
100-100000  
100-100000  
100-100000

## PART 73 • STATEMENTS OF CONSIDERATION

45 FR 72108  
Published 10/31/80  
Effective 10/31/80

### 10 CFR Part 73

#### Physical Protection of Plants and Materials Requirements for the Physical Protection of Nuclear Power Plants

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The U.S. Nuclear Regulatory Commission is extending from November 1, 1980 to December 1, 1980 its current relief from pat-down searches of regular employees at nuclear power reactors in order to allow time for the Commission to consider revisions to its rules in 10 CFR § 73.55 intended to finalize requirements for entry searches at such facilities.

**EFFECTIVE DATE:** October 31, 1980.

**FOR FURTHER INFORMATION CONTACT:** L. J. Evans, Jr., Chief, Regulatory Improvements Branch, Division of Safeguards, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, (301) 427-4181.

**SUPPLEMENTARY INFORMATION:** On July 31, 1979, the Commission changed the date from August 1, 1979, to November 1, 1979, when pat-down searches of regular employees of nuclear power plant licensees had to be implemented. The rationale for this extension was provided in the *Federal Register* notice on this subject, 44 FR 47758, August 15, 1979. The Commission further extended the implementation date to November 1, 1980. The rationale for that extension is contained in 44 FR 65969.

The Commission is presently considering issuing proposed revisions to 10 CFR § 73.55(d)(1) to finalize requirements for personnel searches at protected area portals of power reactors. The *thirty day* extension of the relief from physical pat-down searches of regular employees contained herein is intended to allow sufficient time for Commission consideration of the proposed revisions. Because this rule delays a requirement, and merely continues a temporary situation for a limited period of time, the Commission finds that notice and public procedure are unnecessary and that the change can be made immediate effective without the customary 30 days period of notice required by 5 U.S.C. 553.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy

Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following Amendment to Title 10 Chapter 1, Code of Federal Regulations, Part 73 is published as a document subject to codification.

45 FR 74693  
Published 11/12/80  
Effective 11/28/80

*Licensing Requirements for the Storage of Spent Fuel in an Independent Fuel Spent Storage Installation*

See Part 72 Statements of Consideration

45 FR 79410  
Published 12/1/80  
Effective 12/1/80

### 10 CFR Part 73

#### Searches of Individuals at Power Reactor Facilities

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is extending its current relief from pat-down searches of regular employees at nuclear power reactors in order to accommodate a rulemaking proceeding concerning revisions to its rules in § 73.55 intended to finalize requirements for entry searches at such facilities.

**EFFECTIVE DATE:** December 1, 1980.

**FOR FURTHER INFORMATION CONTACT:** L. J. Evans, Jr., Chief, Regulatory Improvements Branch, Division of Safeguards, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, (301) 427-4181.

**SUPPLEMENTARY INFORMATION:** On July 31, 1979, the Commission changed the date from August 1, 1979, to November 1, 1979, when pat-down searches of regular employees of nuclear power plant licensees had to be implemented. The rationale for this extension was provided in the *Federal Register* notice on this subject, 44 FR 47758, August 15, 1979. The Commission further extended the implementation date to November 1, 1980. The rationale for that extension is contained in 44 FR 65969.

The Commission plans to issue

proposed revisions to 10 CFR § 73.55(d)(1) to finalize requirements for personnel searches at protected area entry portals of power reactors. The extension of the relief from physical pat-down searches of regular employees contained herein is intended to allow sufficient time for public comment on the proposed search requirements and their implementation, if adopted. Because this rule delays a requirement, and merely continues a temporary situation for another limited period of time, the Commission finds that notice and public procedure are unnecessary and that the change can be made immediately effective without the customary 30 day period of notice required by 5 U.S.C. 553.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following Amendment to Title 10 Chapter 1, Code of Federal Regulations, Part 73 is published as a document subject to codification.

➤ 45 FR 80271  
Published 12/4/80

*Licensing Requirements for the Storage of Spent Fuel in an Independent Spent Fuel Storage Installation; Correction*

See Part 72 Statements of Consideration.





JAN 21 1981

UNITED STATES NUCLEAR REGULATORY COMMISSION

RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

SUPPLEMENT NUMBER 8

DATE ISSUED:

(December 15, 1980 - December 31, 1980)

January 6, 1981

FILING INSTRUCTIONS

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\* New Section - Insert following Part 170 and before General Notices.

Prepared by  
Division of Rules and Records, Office of Administration  
Nuclear Regulatory Commission, Washington, D.C. 20555 (Tel. 301/492-7086)

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Superintendent of Documents, Government Printing Office, Washington, D.C. 20402

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## PART 2 • PROPOSED RULE MAKING

45 FR 50349

Published 7/29/80

Comment period extended to 7/21/80

### 10 CFR Parts 2 and 50

#### Possible Amendments to "Immediate Effectiveness" Rule

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Extension of Period for Public Comment on Proposed Rulemaking.

**SUMMARY:** The Commission is extending the time for comments on its notice of proposed rule making on its "immediate effectiveness" rule. That rule provides that construction on a nuclear power plant can begin on the basis of an initial decision by an Atomic Safety and Licensing Board even though that decision is subject to further review within the Commission.

**DATE:** Comment period, as extended, expires July 21, 1980.

**FOR FURTHER INFORMATION CONTACT:** Mr. Peter G. Crane (202) 634-3288.

**SUPPLEMENTARY INFORMATION:** On May 22, 1980, the Commission published a notice in the *Federal Register* (45 FR 34279) requesting comments by July 7, 1980 on a proposed rulemaking concerning possible amendments to the Commission's "immediate effectiveness" rule. On July 6, 1980, Mr. Malcolm H. Philips, Jr. requested a two-week extension of the comment period to July 21, 1980. The Secretary of the Commission, under the authority contained in 10 CFR 2.808, has granted Mr. Philips' request. Accordingly, the time for interested persons to submit written comments to Mr. Samuel J. Chilk, Secretary United States Nuclear Regulatory Commission, Washington, D.C. 20555, has been extended to July 21, 1980.

➤ 45 FR 85459

Published 12/29/80

Comments must be received on or before 3/9/81. Comments received after this date will be considered if it is practical to do so.

*Protection of Unclassified Safeguards Information*

See Part 73 Proposed Rule Making



## PART 50 • PROPOSED RULE MAKING

2. Drawing on § 50.55(a) of 10 CFR Part 50 (dealing with notifications of significant deficiencies having safety significance) and § 50.59 (dealing with changes to previously approved designs having safety significance), adopt a rule that establishes general criteria for determining circumstances requiring notification and CP amendment.

3. Adopt a rule defining "principal architectural and engineering criteria" (in effect reviving the 1969 rulemaking on this subject), using information learned to date.

4. Adopt a rule that all details of the application, including the PSAR, be made conditions of the CP and may not be changed without prior Commission approval.

5. Restructure the licensing process to require that sufficient plant design details and equipment performance specifications be provided in the PSAR so that the safety analysis can be essentially a final one. Upon review and approval, the important safety-related elements of the design would be made conditions of the CP and could not be changed without prior Commission approval. Staff review at the OL stage would then be primarily a matter of confirming that the "as built" plant conformed to the CP-stage safety analysis.

The Commission tentatively prefers implementation of Alternative 3 with a shift to Alternative 5 on June 1, 1983. Rules based on the concepts of alternatives 2, 3, or 4 could be imposed immediately. Alternatives 2 and 3 could provide some specified interval to allow the holders of construction permits to develop a list and description of the features or other changes subject to the rule. Alternatives 4 and 5 could be applied practicably only to new CPs.

Comments, suggestions, or recommendations on a proposed rule that would clarify the bounds on a construction permit holder during the course of construction are invited from all interested persons. Comments which discuss advantages or disadvantages, including cost or implementation schedules and the extent to which any such rule should be applied to existing construction permit holders, are particularly sought.

### ➤ 45 FR 85459

Published 12/29/80

Comments must be received on or before 3/9/81. Comments received after this date will be considered if it is practical to do so.

*Protection of Unclassified Safeguards Information*

See Part 73 Proposed Rule Making

### ➤ 45 FR 86500

Published 12/31/80

Comment period expires 2/17/81

### 10 CFR Part 50

#### Codes and Standards for Nuclear Power Plants

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The Nuclear Regulatory Commission is considering amending its regulations to incorporate by reference new addenda of the ASME Boiler and Pressure Vessel Code. The sections of the ASME Code being incorporated provide rules for the construction of nuclear power plant components and specify requirements for inservice inspection of those components. Adoption of these amendments would permit the use of improved methods for construction and inservice inspection of nuclear power plants.

**DATES:** Comment period expires February 17, 1981.

**ADDRESSES:** All interested persons who wish to submit written comments or suggestions in connection with the proposed amendments should send them to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments received may be examined in the Commission's Public Document Room at 1717 H Street NW., Washington, D.C.

**FOR FURTHER INFORMATION CONTACT:** Mr. E. Baker, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Phone 301-443-5999.

**SUPPLEMENTARY INFORMATION:** On October 9, 1979 the Nuclear Regulatory Commission published in the *Federal*

*Register* (44 FR 57911, 44 FR 57912) amendments to its regulation, 10 CFR Part 50, "Licensing of Production and Utilization Facilities." The amendments revised § 50.55a to incorporate by reference the 1977 Edition and Addenda through the Summer 1978 Addenda to Section III, Division 1, "Rules for the Construction of Nuclear Power Plant Components," of the ASME Boiler and Pressure Vessel Code and Section XI, "Inservice Inspection of Nuclear Power Plant Components," of the ASME Code. Since that time the Winter 1978 Addenda and Summer 1979 Addenda have been issued. The Commission proposes to revise § 50.55a to incorporate by reference the Winter 1978 Addenda and Summer 1979 Addenda of Section III and Section XI of the ASME Boiler and Pressure Vessel Code.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of Title 5 of the United States Code, notice is hereby given that adoption of the following amendments to 10 CFR Part 50 is contemplated.

1. In § 50.55a, paragraph (b)(1) is revised to read as follows:

#### § 50.55a Codes and standards.

(b)(1) As used in this section, references <sup>1</sup> to Section III of the ASME Boiler and Pressure Vessel Code refer to Section III, Division 1, and include editions through the 1977 Edition and addenda through the Summer 1979 Addenda.

2. In § 50.55a, the introductory portion of paragraph (b)(2) is revised to read as follows:

(b)(2) As used in this section, references <sup>1</sup> to Section XI of the ASME Boiler and Pressure Vessel Code refer to Section XI, Division 1 and include editions through the 1977 Edition and addenda through the Summer 1979 Addenda, subject to the following limitations and modifications:

(Secs. 103, 104, 161b, and i., Pub. L. 93-703; 88 Stat. 936, 937, 948; Sec. 201, Pub. L. 93-436, 88 Stat. 1242; (42 U.S.C. 2133, 2134, 2201(b) and (i), 5841))

Dated at Bethesda, Md., this 22d day of December 1980.

<sup>1</sup> These incorporation by reference provisions were approved by the Director of the *Federal Register* on March 17, 1972, May 4, 1973, and February 7, 1978.





## PART 70 • PROPOSED RULE MAKING

for new models. Consideration will be given to reducing the scope of protocols for further implants of models of demonstrated reliability. Accordingly, where it is desirable to select a pacemaker with the longest possible life, the patient and the patient's physician will have the option of selecting a plutonium-238 pacemaker.

The Commission is publishing, concurrently with this notice, withdrawal of its notice of proposed amendment of 10 CFR Part 150 that would have made the Commission the sole agency regulating the routine use of plutonium-238 in cardiac pacemakers.

45 FR 70874

Published 10/27/80

Comment period expires 12/11/80

*Exemption of Technetium-99 and  
Low-Enriched Uranium as Residual  
Contamination in Smelted Alloys*

See Part 30 Statements of Consideration

➤ 45 FR 85459

Published 12/29/80

Comments must be received on or  
before 3/9/81. Comments received  
after this date will be considered  
if it is practical to do so.

*Protection of Unclassified Safeguards  
Information*

See Part 73 Proposed Rule Making



## PART 73 • PHYSICAL PROTECTION OF PLANTS AND MATERIALS

responsibilities, includes demonstration of the ability of the contractor's physical security personnel to perform their assigned duties and responsibilities in carrying out the provisions of the Security Plan and these regulations, and (iv) the contractor will not assign any personnel to the site who have not first been made aware of these responsibilities.

(2) At least one full time member of the security organization who has the authority to direct the physical protection activities of the security organization shall be onsite at all times.

(3) The licensee shall have a management system to provide for the development, revision, implementation, and enforcement of security procedures. The system shall include:

(i) Written security procedures which document the structure of the security organization and which detail the duties of guards, watchmen and other individuals responsible for security; and

(ii) Provision for written approval of such procedures and any revisions thereto by the individual with overall responsibility for the security functions.

(4) The licensee shall not permit an individual to act as a guard watchman, armed response person, or other member of the security organization unless such individual has been trained, equipped, and qualified to perform each assigned security job duty in accordance with Appendix B, "General Criteria for Security Personnel," of this part. Upon the request of an authorized representative of the Commission the licensee shall demonstrate the ability of the physical security personnel to carry out their assigned duties and responsibilities. Each guard, watchman, armed response person, and other member of the security organization shall requalify in accordance with appendix B of this part at least every 12 months. Such requalification shall be documented. By August 20, 1979 each licensee shall submit a training and qualifications plan outlining the processes by which guards, watchmen, armed response persons, and other members of the security organization will be selected, trained, equipped, tested, and qualified to assure these individuals meet the requirements of this paragraph. The training and qualifications plan shall include a schedule to show how all security personnel will be qualified by October 23, 1980 or within 2 years after the submitted plan is approved, whichever is later. The training and qualifications plan shall be followed by the licensee after March 6, 1980 or 60 days after the submitted plan is approved by the NRC, whichever is later.

(c) *Physical barriers.* (1) The licensee shall locate vital equipment only within a vital area, which in turn, shall be located within a protected area such that access to vital equipment requires passage through at least two physical barriers of sufficient strength to meet the performance requirements of paragraph (a) of this section. More than one vital area may be located within a single protected area.

(2) The physical barriers at the perimeter of the protected area shall be separated from any other barrier designated as a physical barrier for a vital area within the protected area.

(3) Isolation zones shall be maintained in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and shall be of sufficient size to permit observation of the activities of people on either side of that barrier in the event of its penetration. If parking facilities are provided for employees or visitors, they shall be located outside the isolation zone and exterior to the protected area barrier.

(4) Detection of penetration or attempted penetration of the protected area or the isolation zone adjacent to the protected area barrier shall assure that adequate response by the security organization can be initiated. All exterior areas within the protected area shall be periodically checked to detect the presence of unauthorized persons, vehicles, or materials.

(5) Isolation zones and all exterior areas within the protected area shall be provided with illumination sufficient for the monitoring and observation requirements of paragraphs (c) (3), (c) (4), and (h) (4) of this section, but not less than 0.2 footcandle measured horizontally at ground level.

(6) The walls, doors, ceiling, floor, and any windows in the walls and in the doors of the reactor control room shall be bullet-resisting.

## PART 73 • PHYSICAL PROTECTION OF PLANTS AND MATERIALS

(d) *Access requirements.* (1) The licensee shall control all points of personnel and vehicle access into a protected area. Identification and search of all individuals shall be made and authorization shall be checked at such points. The search function for detection of firearms, explosives, and incendiary devices shall be conducted either by a physical search or by use of equipment capable of detecting such devices. The individual responsible for the last access control function (controlling admission to the protected area) shall be isolated within a bullet-resisting structure as described in paragraph (c)(6) of this section to assure their ability to respond or to summon assistance.

(2) At the point of personnel and vehicle access into a protected area, all hand-carried packages shall be searched for devices such as firearms, explosives, and incendiary devices, or other items which could be used for industrial sabotage.

(3) All packages and material for delivery into the protected area shall be checked for proper identification and authorization and searched for devices such as firearms, explosives and incendiary devices or other items which could be used for industrial sabotage, prior to admittance into the protected area, except those Commission approved delivery and inspection activities specifically designated by the licensee to be carried out within vital or protected areas for reasons of safety, security or operational necessity.

(4) All vehicles, except under emergency conditions, shall be searched for items which could be used for sabotage purposes prior to entry into the protected area. Vehicle areas to be searched shall include the cab, engine compartment, undercarriage, and cargo area. All vehicles, except designated licensee vehicles, requiring entry into the protected area shall be escorted by a member of the security organization while within the protected area and, to the extent practicable, shall be off loaded in the protected area at a specific designated materials receiving area that is not adjacent to a vital area. Designated licensee vehicles shall be limited in their use to onsite plant functions and shall remain in the protected area except for operational, maintenance, repair security and emergency purposes. The licensee shall exercise positive control over all such designated vehicles to assure that they are used only by authorized persons and for authorized purposes.

(5) A numbered picture badge identification system shall be used for all individuals who are authorized access to protected areas without escort. An individual not employed by the licensee but who requires frequent and extended access to protected and vital areas may be authorized access to such areas without escort provided that he receives a picture badge upon entrance into the protected area which must be returned upon exit from the protected area and which indicates (i) Non-employee-no escort required; (ii) areas to which ac-

cess is authorized and (iii) the period for which access has been authorized. Badges shall be displayed by all individuals while inside the protected area.

(6) Individuals not authorized by the licensee to enter protected areas without escort shall be escorted by a watchman, or other individual designated by the licensee, while in a protected area and shall be badged to indicate that an escort is required. In addition, each such individual shall be required to register his name, date, time, purpose of visit and employment affiliation, citizenship, and name of the individual to be visited.

(7) The licensee shall positively control all points of personnel and vehicle access into vital areas. Access to vital areas shall be limited to individuals who are authorized access to vital equipment and who require such access to perform their duties. Authorization for such individuals shall be provided by the issuance of specially coded numbered badges indicating vital areas to which access is authorized. Access to vital areas for the purpose of general familiarization and other non-work-related activities shall not be authorized except for good cause shown to the licensee. Unoccupied vital areas shall be locked and protected by an active intrusion alarm system.

(8) Access to the reactor containment shall be through doors or hatches which shall be alarmed and have locks of substantial construction to offer penetration resistance and impede both surreptitious and forced entry. Any time frequent access is permitted to containment such as during refueling or major maintenance, positive access control to assure that only authorized personnel and materials are permitted into the containment shall be exercised by the licensee, with a guard or watchman.

(9) All keys, locks, combinations, and related equipment used to control access to protected and vital areas shall be controlled to reduce the probability of compromise. Whenever there is evidence that any key, lock, combination, or related equipment may have been compromised it shall be changed. Upon termination of employment of any employee, keys, locks, combinations, and related equipment to which that employee had access, shall be changed.

(e) *Detection aids.* (1) All alarms required pursuant to this part shall annunciate in a continuously manned central alarm station located within the protected area and in at least one other continuously manned station, not necessarily onsite, such that a single act cannot remove the capability of calling for assistance or otherwise responding to an alarm. The onsite central alarm station shall be considered a vital area and its walls, doors, ceiling, floor, and any windows in the walls and in the doors shall be bullet-resisting. The onsite central alarm station shall be located within a building such that the interior of the central alarm station is not visible from the perimeter of the protected area. This station shall not contain any operational activities that would interfere with the execution of the alarm response function.

(2) All alarm devices including transmission lines to annunciators shall be tamper indicating and self-checking e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when the system is on standby power. The annunciation of an alarm at the alarm stations shall indicate the type of alarm (e.g., intrusion alarm, emergency exit alarm, etc.) and location.

(3) All emergency exits in each protected area and each vital area shall be alarmed.

(f) *Communication requirements.* (1) Each guard, watchman or armed response individual on duty shall be capable of maintaining continuous communication with an individual in each continuously manned alarm station required by paragraph (e)(1) of this section, who shall be capable of calling for assistance from other guards, watchmen, and armed response personnel and from local law enforcement authorities.

(2) The alarm stations required by paragraph (e)(1) of this section shall have conventional telephone service for communication with the law enforcement authorities as described in paragraph (f)(1) of this section.

(3) To provide the capability of continuous communication, radio or microwave transmitted two-way voice communication, either directly or through an intermediary, shall be established, in addition to conventional telephone service, between local law enforcement authorities and the facility and shall terminate in each continuously manned alarm station required by paragraph (e)(1) of this section.

(4) Non-portable communications equipment controlled by the licensee and required by this section shall remain operable from independent power sources in the event of the loss of normal power.

(g) *Testing and maintenance.* Each licensee shall test and maintain intrusion alarms, emergency alarms, communications equipment, physical barriers, and other security related devices or equipment utilized pursuant to this section as follows:

(1) All alarms, communication equipment, physical barriers, and other security related devices or equipment shall be maintained in operable condition. The licensee shall develop and employ compensatory measures including equipment, additional security personnel and specific procedures to assure that the effectiveness of the security system is not reduced by failure or other contingencies affecting the operation of the security related equipment or structures.

(2) Each intrusion alarm shall be tested for performance at the beginning and end of any period that it is used for security. If the period of continuous use is longer than seven days, the intrusion alarm shall also be tested at least once every seven (7) days.

(3) Communications equipment required for communications onsite shall be tested for performance not less fre-

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interim protection will be substantially as provided by proposed § 73.21. The significant provisions of proposed § 73.21 and related law applicable to state employees would generally be as follows: (1) State employees who receive, produce, or acquire schedule information are to protect it against unauthorized disclosure. (2) Only those persons authorized by the governor or his designee or otherwise authorized by § 73.21 are to be allowed access to schedule information. (3) When not in use, written schedule information is to be stored in a security container within a building. A container such as a safe or bank safe deposit box is acceptable. Only authorized persons are to be allowed access to the content of the security container. (4) Schedule information is not to be discussed by telephone except in an emergency or under extraordinary conditions. However, relative schedule information, such as the number of hours of delay resulting from a schedule change may be transmitted by telephone (or other means). (5) Written schedule information may be destroyed by burning, pulping, or other positive method. (6) Written schedule information may be reproduced but only to the extent needed to carry out the state's official business. (7) Newly enacted § 147 of the Atomic Energy Act provides that a civil penalty can be assessed against a person who discloses schedule information without proper authorization or who fails to carry out the information protection requirements.

(The above requirements will be published in the *Federal Register* separately for public comment on their own merits. They are described here so that members of the public may comment more effectively on the proposed amendments to 10 CFR 73.37.)

Once the information protection arrangements are established within a state, a typical notification could be carried out as follows. Notification would be made to the governor shortly before the shipment is to be made. The notification would be by letter, with a "protected" enclosure. All information not protected under the provisions of § 147 would be set forth in the body of the letter. The body of the letter would also contain a paragraph stating that the enclosure is protected from disclosure by law and that there is substantial civil penalty for unauthorized disclosure. The protected enclosure would be contained in a separate, sealed envelope appropriately identified. This practice would permit the basic letter to be opened by persons outside of the authorized chain of individuals who would need to know the protected information, without violation of § 147 and implementing regulations. The letter with its unopened "protected" enclosure could then be passed on to those

persons authorized to receive it.

A volume of protected information would likely accumulate in the absence of an information downgrading system. Downgrading of schedule information appears to be justified because the value of the information to an adversary declines after a shipment or series of shipments is completed. The NRC therefore proposes requirements that automatically downgrade schedule information 10 days after a one-of-a-kind shipment departs a state or 10 days after the last shipment of a series of related shipments departs the state. Downgraded schedule information need not be protected.

### Proposed Rule

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that adoption of the following amendments to 10 CFR Part 73 is contemplated.

Section 73.37 is amended by adding paragraphs (f) and (g) to read as follows:

§ 73.37 Requirements for physical protection of irradiated reactor fuel in transit.

(f) Prior to the transport of spent fuel within or through a state a licensee subject to this section shall notify the governor. The licensee shall comply with the following criteria in regard to a notification:

(1) The notification must be in writing and sent to the office of each appropriate governor. A notification delivered by mail must be postmarked at least 7 days before transport of a shipment within or through the state. A notification delivered by messenger must reach the office of the governor at least 4 days before transport of a shipment within or through the state. A list of the mailing addresses of governors is available upon request from the Director, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

(2) The notification must include the following information:

(i) A listing of the routes to be used within or through the state.  
(ii) Identification of the shipper, the receiver, and the carrier(s).  
(iii) A description of the shipment as specified by the Department of Transportation in 49 CFR 172.202 and 172.203(d).

(iv) A statement that the information described below in § 73.37(f)(3) is required by NRC regulation to be protected in accordance with the requirements of § 73.21.

(3) The licensee shall provide the following information on a separate enclosure to the written notification:

(i) The estimated date and time of departure from the point of origin of the

shipment.

(ii) The estimated date and time of entry into the governor's state.

(iii) For the case of a single shipment whose schedule is not related to the schedule of any subsequent shipment, a statement that schedule information must be protected in accordance with the provisions of § 73.21 until at least 10 days after the shipment has departed the state.

(iv) For the case of a shipment in a series of shipments whose schedules are related, a statement that schedule information must be protected in accordance with the provisions of § 73.21 until 10 days after the last shipment in the series has departed the state and an estimate of the date on which the last shipment in the series will enter the state.

(4) A licensee shall notify a responsible individual in the office of the governor of any schedule change that differs by more than 6 hours from the schedule information previously furnished to a governor in accordance with § 73.37(f)(3), and shall inform that individual of the number of hours of advance or delay relative to the written schedule information previously furnished.

(g) State officials, state employees, and other individuals, whether or not licensees of the Commission, who receive schedule information of the kind specified in § 73.37(f)(3) shall protect that information against unauthorized disclosure as specified in § 73.21.

➤ 45 FR 85459

Published 12/29/80

Comments must be received on or before 3/9/81. Comments received after this date will be considered if it is practical to do so.

10 CFR Parts 2, 50, 70, and 73

### Protection of Unclassified Safeguards Information

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

**SUMMARY:** The NRC proposes to amend its regulations to prohibit the unauthorized disclosure of safeguards information by NRC licensees and other persons. The Commission is issuing the proposed regulations to identify specific types of safeguards information to be protected, establish minimum protection requirements to be applied by licensees and other persons, and set forth the conditions under which access to safeguards information would be granted.



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**DATE:** Comments must be received on or before March 9, 1981. Comments received after this date will be considered if it is practical to do so.

**ADDRESSES:** Written comments in connection with the proposed amendments should be sent to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of comments received may be examined at the Commission's Public Document Room at 1717 H Street, N.W., Washington, D.C.

**FOR FURTHER INFORMATION CONTACT:** Mr. Donald J. Kasum, Physical Security Licensing Branch, Division of Safeguards, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Phone—301-427-4010.

**SUPPLEMENTARY INFORMATION:** In November 1978, the Commission approved a plan to classify, under Executive Order 12065, sensitive safeguards information for activities involving formula quantities of strategic nuclear material. Implementing regulations for the classification program, 10 CFR Parts 25 and 95, were published in the Federal Register on March 5, 1980 (45 FR 14478) with an effective date of October 1, 1980. In regard to the protection of other sensitive safeguards information not classifiable under the Executive Order (i.e., information worthy of protection in the interest of public health and safety but with no direct connection to the national security), the Commission has consistently supported legislation to amend the Atomic Energy Act of 1954, as amended, to provide for explicit authority in this area. Such legislation was recently enacted as a provision of the NRC Authorization of Appropriations Act for 1980 (PL 96-295). A new Section 147, SAFEGUARDS INFORMATION, was added to the Atomic Energy Act which directs the Commission to prescribe regulations or issue orders, after notice and opportunity for public comment, as necessary, to prohibit the unauthorized disclosure of safeguards information which specifically identifies a licensee's or applicant's detailed—

(1) Control and accounting procedures or security measures for the physical protection of special nuclear material;

(2) Security measures for the physical protection of source material or byproduct material; or

(3) Security measures for the physical protection of and the location of certain plant equipment vital to the safety of production or utilization facilities.

Accordingly, the Nuclear Regulatory Commission proposes to amend its regulations in 10 CFR Parts, 2, 50, 70, and 73, and invites public comment on

the proposed amendments.

The requirements set forth in these proposed rules are the minimum restrictions that the Commission believes will be responsive to the new legislation, in that (i) the information to be protected is limited to specific safeguards measures employed by licensees or proposed by applicants; (ii) the only conditions for access are a "need-to-know" and certain specified employment statuses; and (iii) facilities and materials covered by the rule are limited to those the Commission has already determined need to be protected against theft or sabotage. The essential characteristics of the information protection system are as follows:

*Types of safeguards information to be protected*—In general, the proposed rule covers information previously withheld under 10 CFR 2.790(d)(1). A new proposed Appendix E to 10 CFR Part 73 defines explicitly types of information required to be protected.

In summary the list includes information regarding (unless otherwise classified as National Security Information (NSI) or Restricted Data (RD)):

- i. Physical Protection at Fixed Sites
  - Composite security and contingency plans
  - Drawings showing location of site safeguards features and alarm system details
  - Written guard orders and procedures
  - Details of off-site response force capabilities (local police)
  - Plant specific composite listings and locations of vital safety related equipment at reactor facilities as contained in physical security and safeguards contingency plans and plant specific analyses.
- ii. Physical Protection In Transit
  - Composite security and contingency plans
  - Schedules and itineraries for specific shipments
  - Description of vehicle safeguards features
  - Detail of local police response force capabilities
- iii. Calculated limits of error associated with inventory differences (LEID)<sup>1</sup>
- iv. Inspections, audits and evaluations
  - Portions of inspection reports, audits or investigations that contain details of a physical security system or that disclose uncorrected defects in the system.

<sup>1</sup> Note that a licensee's or applicant's control and accounting procedures or inventory differences would not be included as Safeguards Information, and therefore not protected under the provisions of this proposed rule. Such information would continue to be withheld from public disclosure under 10 CFR 2.790(d), and in addition inventory differences for facilities that possess formula quantities of strategic special nuclear material would be classified under 10 CFR Part 95.

—Portions of inspection reports, audits or investigations that contain limit of error data (LEID) or that disclose defects in a licensee's accounting system that could directly affect an LEID.

### v. Correspondence

—Portions of correspondence to and from the NRC which contain details of any of the above.

A summary of the arguments surrounding the selection of each type of information is set forth below.

**Group I—Information regarding physical protection at fixed sites.** Included in this group are physical security plans, safeguards contingency plans, drawings that show safeguards features and details of the intrusion alarm system, composite listings of vital equipment and locations, written guard orders, and capabilities and arrangements made with local response forces.

There is general agreement that the release of this type of information in significant detail would significantly increase the likelihood of theft or sabotage by:

—Reducing deterrence value. A good example is the passenger search system at airports which worked extremely well for years because the performance characteristics of the system were not known. (The FAA has protected their security information under specific legislative authority since the early 1970's.) Once it was found that the systems could not detect certain items, some of the deterrence was lost.

—Allowing for possible compromise of the intrusion detection system and successful covert intrusion. Most alarm systems used to protect nuclear facilities are tamper resistant and tamper indicating, making compromise all but impossible for even sophisticated adversaries. However, with knowledge of the electrical details and performance characteristics of alarm equipment, elimination of alarm system protection becomes possible.

—Providing an opportunity for advance planning. In this regard the Generic Adversary Characteristics Report (NUREG-0549) states: "Professional criminals, many terrorists groups, some extremist protest groups, and certain disoriented persons plan carefully and thoughtfully before initiating a given criminal mission. Many of these adversaries will abort planned encounters when security or other interruptions occur." Our thought here is that opportunity to plan is a key element in target selection, and an essential element in a successful operation.

—Pinpointing target areas for power reactors—As part of a security plan review, Los Alamos National Laboratory provides to the Commission a detailed list of vital areas for a specific power reactor, a rank ordering of the importance of each vital area and sets

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or combinations that is sabotaged as a group would cause an offsite release.

This is the type of information the Commission intends to protect under this rule. Obviously, such information would be valuable to an adversary planning an attack for without it the probability of successful sabotage would be quite small.

Group II—Information regarding physical protection in transit. Included in this group are the same types of information as for fixed site plus schedules and itineraries for shipments.

Release of information in this group would have the same potential adverse effects as for fixed information, plus this additional concern.

—Knowledge of shipment schedules and itinerary would allow an adversary to plan for and pick the time and place for a road ambush, thereby placing the defense forces at a significant disadvantage. (For multiple shipments over the same route, the itinerary, but not the schedule, tends to be self-disclosing. Therefore, routes for spent fuel shipments, which normally consist of several shipments in a series, are not withheld from disclosure.)

Group III—Information regarding calculated limit of error associated with inventory differences (LEID). Included in this group are LEID's for any facility that possesses one effective kilogram or more of special nuclear material. (Note that nuclear material control plans, implementing procedures and records, and inventory differences are not included as protected safeguards information. This information in whole or in part does not appear to meet the Section 147 test for withholding.)

Disclosure of LEID information would aid an insider adversary in determining how much material could be diverted without exceeding the alarm threshold.

Group IV—Inspection reports, audits and investigations. This group includes reports produced by the licensee or the NRC that contain information from Groups I, II, and III, or those portions of such reports that contain details of an uncorrected defect or weakness in a licensee's safeguards program.

Disclosure of the details of an uncorrected vulnerability could provide a blueprint for defeat of the safeguards system and could be more harmful than the release of the security program itself. (For example, disclosing that a facility's motion alarm system could not detect a person crawling on hand and knees would provide significant benefit to a would be adversary.)

Therefore, based upon the above considerations, the Commission has determined that the unauthorized disclosure of the kinds of Safeguards Information listed in proposed Appendix E could reasonably be expected to have

significant adverse effect on the health and safety of the public or the common defense and security by significantly increasing the likelihood of theft, diversion, or sabotage of nuclear material or a facility.

**Access requirements**—Access to the safeguards information would be limited to persons who have a need-to-know and who fall within certain employment or occupation categories. These categories include:

—Employees of a licensee, applicant, the Commission, the United States, Government or agents of these bodies.

—Duly authorized Congressional Committees.

—Governors of States or their representatives.

—Representatives of the IAEA associated with the US/IAEA Agreement.

—Members of state and local police units.

—Parties in NRC adjudicatory hearings or federal court litigation involving the NRC when authorized by the presiding officer or court, as appropriate.

There would be no personnel security clearances required for these individuals. Section 147 contains no provisions regarding trustworthiness determinations (as are set forth in Section 145 for access to Restricted Data) and, consistent with the directive of Section 147 that only the minimum restrictions be applied to Safeguards Information, the Commission believes such clearances are not necessary.

**Level of protection**—The protection afforded the safeguards information would be substantially greater than that currently afforded to information under 10 CFR 2.790(d) and in some respects approaches that provided Confidential National Security Information (CNSI) under 10 CFR Part 95, except that there would be no requirement for personnel security clearances. Protection provisions include:

—Storage in steel filing cabinet equipped with a locking bar within a protected or controlled access area; or in a GSA approved security container within a locked building not in a protected or controlled access area.

—Control by an authorized individual while in use.

—Marking of documents top and bottom—Safeguards Information—and indicating on the first page the name and organization of the authorizing individual (portion marking would not be required except on reports and correspondence).

—Prohibition against transmittal by unprotected telecommunications except

under emergency or extraordinary conditions.

There would be no requirements for facility clearance or submittal of an information protection plan as are contained in 10 CFR Parts 25 and 95.

**Persons, facilities and materials that are subject to the proposed rule**—The proposed rule would apply to any person that possesses safeguards information, any applicant required by NRC regulations to submit a physical security, safeguards contingency or nuclear material control plan, and each licensee subject to the physical protection provisions of Part 73. Included in the latter would be:

—Power reactors

—Non-power reactors

—Fuel cycle facilities and transportation activities involving special nuclear material of moderate and low strategic significance

—Fuel cycle and transportation activities involving formula quantities of strategic special nuclear material for safeguards information not otherwise Classified NSI or RD

—Spent fuel shipments except for routes and quantities

Since there are no present NRC requirements for the physical protection of source or byproduct material, facilities that possess or use these materials exclusively would not be subject to the proposed rule.

**Information Types Not Included**—Certain types of information, even though possibly regarded as safeguards information, would not fall within the scope of the proposed rule. Most notably are studies, reports and analyses conducted by or on behalf of the Commission, licensees or applicants which concern the safeguarding of nuclear materials or facilities. Information not covered by the rule includes:

1. Documents, drawings or reports submitted by applicants or licensees, or produced by the staff, in response to the environmental and safety requirements contained in 10 CFR Parts 50, 51, 70, and 71.

2. Generic safeguards studies, reports or analysis whether or not produced by or for the Commission or a licensee.

3. Routes and quantities for spent fuel shipments.

4. Guard training and qualification plans.

5. Information concerning licensee control and accounting procedure, or inventory differences (not otherwise classified as NSI or RD) for special nuclear material, or source material and byproduct material.

6. Any information already in the public domain including commercial

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safeguards equipment specifications, catalogues and equipment buying data.

*Freedom of Information Act Considerations (FOIA)*—Section 147, in the introductory paragraph, provides that the Commission's exercise of the new authority contained in the section be made "subject to subsection (b)(3) of section 552 of title 5 of the United States Code" (FOIA). The Joint Explanatory Statement of the Committee on Conference in regard to this provision, contains the following:

"This express reference to the Freedom of Information Act is intended to make it clear that the compromise provision is a specific statutory exemption from the FOIA, as provided for in Section 5 U.S.C. 552(b)(3), and meets all the requirements for a statutory exemption under that section"

Implementing procedures in response to FOIA requirements are contained in 10 CFR Part 9, Subpart A. No change to Part 9 is considered to be necessary and none are proposed.

While material control and accounting records and information (other than LEID) would not be identified as Safeguards Information and accordingly would not be entitled to the special protections provided for that information under Section 147, the Commission staff proposes that the Commission continue to designate such information as commercial or financial information under 2.790(d)(1). The effect of revising 2.790(d)(1) as proposed will be to continue a basis for withholding this material control and accounting information from public release pursuant to 10 CFR 9.5(a)(4). (Exemption 4 of the FOIA), and to avoid requiring individual determinations of whether the information qualifies for withholding bases on the standard for proprietary information. Because the staff believes material control and accounting information consistently contains matters entitled to some measure of protection, it recommends use of 2.790(d)(1). Public comment is particularly requested on the proposed action regarding 2.790(d)(1).

### *Agency Proceedings*

The Authorization Act also amended Section 181 of the Atomic Energy Act of 1954 by extending the requirements of this Section to safeguards information protected under the authority of Section 147. As amended, Section 181 requires that the Commission, in the case of agency proceedings, provide by regulation procedures that will effectively safeguard and prevent disclosure of Restricted Data, defense information or safeguards information to authorized persons with minimum

impairment of the procedural rights which would be available if Restricted Data, defense information or safeguards information were not involved. As regards to safeguards information, basic regulations, as set forth in 10 CFR 2.744, "Production of NRC records and documents" and 10 CFR 2.790 "Public inspections, exemption, requests for withholding" are already in effect. (Restricted Data and National Security Information are covered in Subpart I of Part 2—Special Procedures Applicable to Adjudicatory Proceedings Involving Restricted Data or National Security Information.)

In addition to the regulations already in place, the staff proposes to amend 10 CFR 2.744 to add a provision giving presiding officers the authority to issue appropriate protective orders whenever protected Safeguards Information is required in an adjudicatory hearing. Because no clearances are required for access to Safeguards Information under Section 147, the staff believes it to be unnecessary to include such information in Subpart I of Part 2.

The promulgation of these amendments would not result in any activity that affects the environment. Accordingly, The Commission has determined under the National Environmental Quality guidelines and the criteria of 10 CFR 51.5(d) that neither an environmental impact statement nor environmental impact appraisal to support a negative declaration for the proposed amendments to Title 10 is required.

The NRC estimated the cost of these amendments to the licensed industry and the various states that would be required to protect the spent fuel shipping notices against unauthorized disclosure. Accordingly to these estimates the initial costs of storage container procurement and document marking would be about \$100,000 and \$250,000 respectively. Annual recurring costs for document processing and control would be about \$300,000.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act 1974, as amended, and Sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that adoption of the following amendments to Title 10, Chapter I, Code of Federal Regulations, Parts. 2, 50, 70, and 73, is contemplated.

### PART 2—RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS

1. Section 2.744 is amended by adding a new paragraph (e) to read as follows:

#### § 2.744 Production of NRC records and documents.

(e) In the case of requested documents and records (including Safeguards Information referred to in sections 147 and 181 of the Atomic Energy Act, as amended) exempt from disclosure under § 2.790 of this Part, but whose disclosure is found by the presiding officer to be necessary to a proper decision in the proceeding, any order to the Executive Director for Operations to produce the document or records (or any other order issued ordering production of the document or record) may contain such protective terms and conditions (including affidavits of non-disclosure) as may be necessary and appropriate to limit the disclosure to parties in the proceeding, to interested States and other governmental entities participating pursuant to § 2.715(c) of this Part, and to their qualified witnesses and counsel. When Safeguards Information protected from disclosure under section 147 of the Atomic Energy Act, as amended, is received and possessed by a party other than the Commission staff, it shall also be protected according to the requirements of § 73.21 of Part 73 of this Chapter. The presiding officer may also prescribe such additional procedures as will effectively safeguard and prevent disclosure of Safeguards Information to unauthorized persons with minimum impairment of the procedural rights which would be available if Safeguards Information were not involved. In addition to any other sanction that may be imposed by the presiding officer for violation of an order issued pursuant to this paragraph, violation of an order pertaining to the disclosure of Safeguards Information protected from disclosure under section 147 of the Atomic Energy Act, as amended, may be subject to a civil penalty imposed pursuant to § 2.205 of this Part.

2. Section 2.790 is amended by revising paragraph (d)(1) as follows:

#### § 2.790 Public inspections, exemptions, requests for withholding.

(d)(1) Correspondence and reports to or from the NRC which contain information or records concerning a licensee's or applicant's material control and accounting program for special material.

### PART 50—DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

3. Section 50.34 is amended by adding a new paragraph (e) to read as follows:



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### § 50.34 Contents of applications; technical information.

(e) Each applicant who prepares a physical security plan or safeguards contingency plan pursuant to this section, shall protect the plan and other related Safeguards Information against unauthorized disclosure in accordance with the requirements of § 73.21 and Appendix E to Part 73 of this chapter.

4. Section 50.54 is amended by adding a new paragraph (v) to read as follows:

### § 50.54 Conditions of licenses.

(v) Each licensee subject to the requirements of this section shall ensure that physical security and safeguards contingency plans and other related Safeguards Information are protected against unauthorized disclosure in accordance with the requirements of § 73.21 and Appendix E to Part 73 of this chapter.

### PART 70—DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

5. Section 70.22 is amended by adding a new paragraph (l) after paragraph (k) to read as follows:

### § 70.22 Contents of applications.

(l) Each applicant who prepares a physical security or safeguards contingency plan shall protect such plans and other related Safeguards Information against unauthorized disclosure in accordance with the requirements of § 73.21 and Appendix E to Part 73 of this chapter.

6. Section 70.32 is amended by adding a new paragraph (j) to read as follows:

### § 70.32 Conditions of licenses.

(j) Each licensee subject to the requirements of this section shall ensure that physical security and safeguards contingency plans and other related Safeguards Information are protected against unauthorized disclosure in accordance with the requirements of § 73.21 and Appendix E to Part 73 of this chapter.

### PART 73—PHYSICAL PROTECTION OF PLANTS AND MATERIALS

7. Section 73.1(b) is amended by adding a new paragraph (7) to read as follows:

### § 73.1 Purpose and scope.

(7) This part prescribes requirements for the protection of Safeguards Information in the hands of any person,

whether or not a licensee of the Commission, who produces, receives, or acquires Safeguards Information.

8. Section 73.2 is amended by adding new paragraphs (jj), (kk), (ll) & (mm) to read as follows:

### § 73.2 Definitions

(jj) "Safeguards Information" means information not otherwise classified as National Security Information or Restricted Data which specifically identifies a licensee's or applicant's detailed, (1) security measures for the physical protection of special nuclear material, (2) security measures for the physical protection and location of certain plant equipment vital to the safety of production or utilization facilities, or (3) limits of error associated with inventory differences (LEID) for special nuclear material.

(kk) "Need-To-Know" means a determination by a person having responsibility for protecting Safeguards Information that a proposed recipient's access to Safeguards Information is necessary in the performance of official, contractual, or licensee duties of employment.

(ll) "Person" means (1) any individual, corporation, partnership, firm, association, firm, association, trust, estate, public or private institution, group, government agency other than the Commission or the Department of Energy (DOE), (except that the DOE shall be considered a person to the extent that its facilities are subject to the licensing and related regulatory authority of the Commission pursuant to Section 202 of the Energy Reorganization Act of 1974 and Sections 104, 105, and 202 of the Energy Reorganization Act of 1974 and Sections 104, 105, and 202 of the Uranium Mill Tailings Radiation Control Act of 1978), any state or political subdivision of state, or any political subdivision of any government or nation, or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing.

(mm) "Security Storage Container" includes any of the following repositories: (1) A steel filing cabinet equipped with a steel locking bar and a 3 position, changeable combination, GSA approved padlock, for storage in a building located within a protected or controlled access area; (2) A security filing cabinet that bears a Test Certification Label on the side of the locking drawer, inside wall adjacent to the locking drawer, or interior door plate, and is marked, "General Services Administration Approved Security Container" on the exterior of the top

drawer of door; (3) A bank safe-deposit box; and (4) Other repositories which in the judgment of the NRC, would provide comparable physical protection.

9. A new § 73.21 is added to read as follows:

### § 73.21 Requirements for the protection of safeguards information.

#### (a) General Performance

*Requirement*—Each licensee subject to the provisions of §§ 73.20, 73.25, 73.28, 73.37, 73.40, 73.45, 73.46, 73.50, 73.55, 73.60, or 73.67, and each person who produces, receives, or acquires Safeguards Information shall ensure that Safeguards Information is protected against unauthorized disclosure. To meet this general performance requirement, licensees and persons subject to this section shall establish and maintain an information protection system that includes the measures specified in paragraphs (b) through (i) of this section.

(b) *Information to be Protected*—The specific types of information, documents, and reports that shall be protected are set forth in Appendix E of this Part.

(c) *Access to Safeguards Information*—(1) Except as the Commission may otherwise authorize, no person may have access to Safeguards Information unless the person has an established "need-to-know" for the information and is:

(i) An employee, agent, or contractor of an applicant, a licensee, the Commission, or the United States Government.

(ii) A member of a duly authorized committee of the Congress.

(iii) The Governor of a State or designated representative.

(iv) A representative of the International Atomic Energy Agency (IAEA) engaged in activities associated with the U.S./IAEA Safeguards Agreement who has been certified by the NRC.

(v) A member of a state or local law enforcement authority that is responsible for responding to requests for assistance during safeguards emergencies, or

(vi) A person to whom disclosure is ordered pursuant to § 2.744 of Part 2 of this chapter.

(2) Except as the Commission may otherwise authorize, no person may disclose Safeguards Information to any other person except as set forth in paragraph (c)(1) of this section.

(d) *Protection While in Use or Storage*—(1) While in use, matter containing Safeguards Information shall be under the control of an authorized individual to preclude access by persons

## PART 73 • PROPOSED RULE MAKING

who do not have a need-to-know or are otherwise not authorized access in accordance with this section.

(2) While unattended or not in actual use, Safeguards Information shall be stored in a locked security storage container within a locked room or building. Knowledge of lock combinations protecting Safeguards Information shall be limited to a minimum number of personnel for operating purposes who have a "need-to-know" and are otherwise authorized access to Safeguards Information in accordance with the provisions of this section.

(e) *Preparation and Marketing of Documents*—(1) Each document that contains Safeguards Information as defined in Appendix E of this part shall contain on the face of the document (i) the name, title, and organization of the individual authorized to make a Safeguards Information determination, and who has determined that the document contains Safeguards Information, (ii) the date the document was originated or the determination made, and (iii) an indication that the document contains Safeguards Information. Each page shall be marked in a conspicuous fashion at the top and bottom with the legend SAFEGUARDS INFORMATION.

(2) If the document contains any form of Restricted Data or National Security Information, it shall also be marked in accordance with the provisions of 10 CFR Part 95.

(3) Transmittal letters or memoranda which do not in themselves contain Safeguards Information shall be marked to indicate that attachments or enclosures contain Safeguards Information.

(4) In addition to the information required on the face of the document, each item of correspondence to and from the NRC that contains Safeguards Information shall, by marking or other means, clearly indicate which portions (e.g., paragraphs or pages) contain Safeguards Information and which do not. (Portion marking is not required for the specific items of information set forth in Appendix E other than correspondence to and from the NRC.)

(f) *Reproduction and Destruction of Matter Containing Safeguards Information*—(1) Safeguards Information may be reproduced to the minimum extent necessary consistent with need without permission of the originator.

(2) Documents containing Safeguards Information may be destroyed by burning, pulping or other methods that assure complete destruction of the information they contain.

(g) *External Transmission of Documents and Material*—(1) Documents containing Safeguards Information, when transmitted outside an authorized place of use or storage, shall be enclosed in two sealed envelopes or wrappers. The inner envelope or wrapper shall contain the name and address of the intended recipient, be marked both sides, top and bottom with the words SAFEGUARDS INFORMATION. The outer envelope or wrapper shall contain the intended recipient's name and address with no indication that the document inside contains Safeguards Information.

(2) Safeguards Information may be transported by messenger-courier, or United States first class, registered, express, or certified mail.

(3) Safeguards Information shall not be transmitted by unprotected telecommunications circuits (including facsimile) except under emergency or extraordinary conditions.

(h) *Use of Automatic Data Processing (ADP) Systems*—Safeguards Information may be processed or produced on an ADP system provided that the system is self-contained within the licensee's facility and requires the use of an access code, or has been approved for security by the NRC.

(i) *Removal from Safeguards Information Category*—Documents originally containing Safeguards Information shall be removed from the Safeguards Information category whenever the information no longer meets the criteria contained in this section and Appendix E of this part.

10. Section 73.80 is amended by adding a reference to Section 147 of the Atomic Energy Act of 1954 as amended, as follows:

### § 73.80 Violations.

An injunction or other court order may be obtained prohibiting any violation of any provision of the Atomic Energy Act of 1954, as amended, or Title II of the Energy Reorganization Act of 1974, or any regulation or order issued thereunder. A court order may be obtained for the payment of a civil penalty imposed pursuant to section 234 of the Act for violation of section 53, 57, 62, 81, 82, 101, 103, 104, 107, 109, or 181 of the Act, or section 206 of the Energy Reorganization Act of 1974, or any rule, regulation, or order issued thereunder, or any term, condition, or limitation of any license issued thereunder, or for any violation for which a license may be revoked under section 186 of the Act. Any person who willfully violates any provision of the Act or any regulation or order issued thereunder may be guilty of a crime and, upon conviction, may be

punished by fine or imprisonment or both, as provided by law.

11. A new Appendix E to Part 73 is added to read as follows:

### Appendix E to Part 73—Protection of Safeguards Information

Introduction: This appendix defines the specific type of information and documents that are subject to the information protection requirements of § 73.21.

#### Appendix E

I. The following items shall be considered Safeguards Information.

##### A. Physical Protection at Fixed Sites

Information not otherwise Classified as Restricted Data or National Security Information relating to the protection of (i) power and non-power reactors, (ii) facilities that possess special nuclear material of moderate and low strategic significance, and (iii) facilities that possess formula quantities of strategic special nuclear material. Specifically:

(1) The composite physical security plan for the nuclear facility or site.

(2) Site specific "as built" drawings, diagrams, sketches, or maps showing the identity, barrier construction, internal layout, and location of facility safeguards features including alarm stations, guard posts, defensive positions, and patrol routes.

(3) As installed details of alarm system layouts showing location of intrusion detection devices, alarm assessment equipment, system wiring, normal and emergency power sources, and duress alarms.

(4) Written orders and procedures for guards and other security personnel, duress codes, and patrol schedules.

(5) Details of the on-site and off-site communications systems.

(6) Lock combination and mechanical key design.

(7) Plant specific composite listings and locations of vital safety-related equipment at production or utilization facilities as contained in physical security plans, safeguards contingency plans and plant specific safeguards analyses.

(8) The composite safeguards contingency plan for the facility or site.

(9) Response plans to specific threats detailing size, disposition, response times, and armament of responding forces.

(10) Size, armament, and disposition of on-site reserve forces.

(11) Size, identity, armament, and response times of off-site response forces.

##### B. Physical Protection In Transit

Information not otherwise classified as Restricted Data or National Security Information relative to the protection of shipments of (i) spent fuel, (ii) special nuclear material of moderate and low strategic significance, and (iii) formula quantities of strategic special nuclear material. Specifically:

(1) The composite transportation physical security plan.



## PART 73 • PROPOSED RULE MAKING

(2) Schedules and itineraries for specific shipments.<sup>1</sup>

(3) Details of vehicle immobilization features, intrusion alarm devices, and communications systems.

(4) Arrangements with and capabilities of local police response forces, and locations of safe havens.

(5) Details regarding limitations of radio-telephone communications.

(6) Procedures for response to safeguards emergencies.

### *C. Limits of Error of Inventory Differences*

Information not otherwise classified as Restricted Data or National Security Information relating to calculated limits of error associated with inventory differences (LEID) at facilities that possess one effective kilogram or more of special nuclear material.

### *D. Inspections, Audits & Evaluations*

Information not otherwise classified as National Security Information or Restricted Data relating to safeguards inspections and reports. Specifically:

(1) Portions of safeguards inspection reports, evaluations, audits, or investigations that contain details of a licensee's or applicant's physical security system or that disclose uncorrected defects, weaknesses, or vulnerabilities in the system.<sup>1</sup>

(2) Portions of safeguards inspection reports, evaluations, audits, or investigations that contain limits of error associated with inventory differences (LEID), or that disclose uncorrected defects or weaknesses in a licensee's accounting system that could directly affect the LEID.<sup>1</sup>

### *E. Correspondence To and From the NRC*

Portions of correspondence to and from the NRC insofar as they contain Safeguards Information specifically defined in paragraph A through D of this Appendix.

(Secs. 53, 147, 161b, 161i, 161o, 181, Pub. L. 83-703 as amended, 68 Stat. 930, 946, 949, 953; Sec. 201, Pub. L. 93-438, 86 Stat. 1242-1243; Sec. 207 Pub. L. 96-295, 94 Stat. 780 (42 U.S.C. 2073, 2201, 2231, 5841)).

Dated at Washington, D.C. this 19th day of December 1980.

For the U.S. Nuclear Regulatory Commission.

Samuel J. Chilk,

Secretary of the Commission.

<sup>1</sup>Routes and quantities for shipments of spent fuel are not withheld from public disclosure. Schedules for spent fuel shipments may be released 10 days after the last shipment of a current series. (Reference § 73.37(e)(3)).

<sup>2</sup>Schedules and itineraries for shipments other than those involving spent fuel or formula quantities of strategic special nuclear material may be released if it becomes necessary to disclose such information to common carriers or other persons not subject to the general licensee provisions of 10 CFR 70.20(a).



## MATERIALS INCORPORATED INTO 10 CFR PARTS 0-199 BY REFERENCE

➤ 45 FR 86672

Published 12/31/80

Effective 12/31/80

### OFFICE OF THE FEDERAL REGISTER

#### 1 CFR Part 51

#### Approval of Incorporations by Reference

**AGENCY:** Office of the Federal Register.

**ACTION:** Approval of incorporations by reference

**SUMMARY:** The Director of the Federal Register has received requests from several agencies to approve materials incorporated by reference into Titles 1 through 16 of the Code of Federal Regulations (CFR). This document contains a table of items that have been approved by the Director for Titles 1 through 16 as well as some material for Title 46 of the CFR.

**EFFECTIVE DATE:** The Director approves the following incorporations by reference for one year effective January 1, 1981, unless otherwise noted.

**FOR FURTHER INFORMATION CONTACT:** Rose Anne Lawson, (202) 523-4534.

#### SUPPLEMENTARY INFORMATION:

##### Authority

Each agency that wishes material incorporated by reference in the CFR to remain effective must annually submit to the Director a list of that material and the date of the applicable edition (1 CFR 51.13).

The materials included on the table below are incorporated by reference in the CFR under 5 U.S.C. 552(a) and 1 CFR Part 51. These procedures provide that material approved for incorporation by reference by the Director of the Federal Register has the same legal status as if it were published in full in the Federal Register.

##### Availability

Before an agency may incorporate by reference any material into the Code of Federal Regulations, it must make the material reasonably available to the class or persons affected by it.

Agencies have indicated where each item included in the table may be obtained. The materials approved for incorporation by reference are available for inspection and copying at the Office of the Federal Register, 1100 L Street, NW, Washington, D.C. (202) 633-6930.

#### Amendments

If the producer of materials approved for incorporation by reference changes or updates the material and the agency wishes to enforce the changed or updated version, the agency must publish an amendatory document in the Federal Register indicating that the material is amended. The agency also is responsible for making this material reasonably available to the affected public, and must indicate where the material may be obtained. Amendments are not properly incorporated until the amendatory document is published in the Federal Register, and the amended material is filed at the Office of the Federal Register and is made available to the public.

#### Extensions

The Director has granted extensions of approval with respect to some material. These extensions are necessary in order to complete the review process under 1 CFR 51.13. Materials to which an extension applies are marked in the table.

#### Other CFR Titles

For materials approved for incorporation by reference in Titles 28 through 41 of the CFR, see documents published on June 30, 1980 at 45 FR 44090; on July 14, 1980 at 45 FR 47111; and on September 9, 1980 at 45 FR 59297.

For materials approved for incorporation by reference in Titles 42 through 50 of the CFR, see documents published on September 30, 1980 at 45 FR 64816; on October 31, 1980 at 45 FR 72464; on December 1, 1980 at 45 FR 79489; and on December 10, 1980 at 45 FR 81484. In addition, this document announces some final approvals for incorporation by reference into Title 46 of the CFR.

For material approved for incorporation by reference in Titles 17 through 27 of the CFR, a document will be published on March 31, 1981.

#### Problems

If there is a problem getting the material, notify the agency. If the material is not available at all, notify the Director of the Federal Register (NARS), Washington, D.C. 20408, or call (202) 523-4534.

Dated: December 18, 1980.

John E. Byrne,

Director of the Federal Register.

# MATERIALS INCORPORATED INTO 10 CFR PARTS 0-199 BY REFERENCE

## 10 CFR Chapter I (Parts 0-199)—Nuclear Regulatory Commission

Each of the following documents is available for inspection at the Nuclear Regulatory Commission's Library, 7920 Norfolk Avenue, Bethesda, Maryland. The individual documents are available through the sources listed below.

CFR Citation

### American Association of Physicists in Medicine

335 E. 45th Street, New York, New York 10017

"Scientific Committee on Radiation Dosimetry of the American Association of Physicists in Medicine", Physics in Medicine and Biology, Volume 16, No. 3, 1971, 379-396. 35.21(c)

### American Nuclear Society (ANS)

355 North Kensington Avenue, La Grange Park, Illinois 60525

Proposed American Nuclear Society Standard—"Decay Energy Release Rates Following Shutdown of Uranium Fueled Thermal Reactors," Approved by Subcommittee ANS-5, ANS Standards Committee, October 1971. Part 50, App. K, I.A.4

### American National Standards Institute

1430 Broadway, New York, New York 10018

American Standard Code for Pressure Piping ASA B31.1 1955 Edition.... 50.55a

U.S.A. Standard Code for Pressure Piping USAS B31.1.0 1967 Edition, Addenda A, B & C. 50.55a

U.S.A. Standard Code for Pressure Piping USAS B31.7 1969 Edition, Addenda A, B & C. 50.55a

ANSI N45.4-1972, "Leakage Rate Testing of Containment Structures for Nuclear Reactors, March 16, 1972. Part 50, App. J, III.A.3.a

ANSI Standard MH5.1 "Basic Requirements for Cargo Containers" (1971). 73.26

Extension granted to Feb. 1, 1981

International Standards Organization (ISO) 1496 "General Cargo Containers" 1978. 73.26

Extension granted to Feb. 1, 1981

International Standards Organization (ISO) 389 "Standard Reference Zero for the Calibration of Pure-tone Audiometer" (1965). 73, App. B, I.B.b(2)

Extension granted to Feb. 1, 1981

ANSI S3.8, "Specifications for Audiometers" (1979) ..... Part 73, App. B, I.B.b(2)

Extension granted to Feb. 1, 1981

### American Society of Mechanical Engineers (ASME)

United Engineering Center, 345 East 47th Street, New York, New York 10017

ASME Boiler and Pressure Vessel Code Section III ..... 50.55a

Edition 1963: Addenda Summer 64; Winter 64 .....  
Edition 1965: Addenda Summer 65; Winter 65; Summer 66; Winter 66;  
Summer 67; Winter 67.

Edition 1968: Addenda Summer 68; Winter 68; Summer 69; Winter 69;  
Summer 70; Winter 70.

Edition 1971: Addenda Summer 71; Winter 71; Summer 72; Winter 72;  
Summer 73; Winter 73.

ASME Boiler and Pressure Vessel Code Section III, Division 1 ..... 50.55a

Edition 1974: Addenda Summer 74; Winter 74; Summer 75; Winter 75;  
Summer 76; Winter 76.

Edition 1977: Addenda Summer 77; Winter 77; Summer 78 ..... 50.55a

ASME Boiler and Pressure Vessel Code Section XI, Division 1 ..... 50.55a

Edition 1970: Addenda Winter 70

Edition 1971: Addenda Summer 71; Winter 71; Summer 72; Winter 72;  
Summer 73; Winter 73.

Edition 1974: Addenda Summer 74; Winter 74; Summer 75; Winter 75;  
Summer 76; Winter 76.

Edition 1977: Addenda Summer 77; Winter 77; Summer 78

Draft ASME Code for Pumps and Valves for Nuclear Power dated November 1968 and 1 addenda dated 1970. 50.55a

### American Society of Mechanical Engineers

United Engineering Center, 2nd Flood Library, 345 East 47th Street, New York, New York 10017

F. J. Moody, "Maximum Flow Rate of a Single Component, Two-Phase Mixture," Journal of Heat Transfer, Trans American Society of Mechanical Engineers, 87, No. 1, February 1965. Part 50, App. K, I.C.1.b.

## MATERIALS INCORPORATED INTO 10 CFR 0-199 BY REFERENCE

### 10 CFR Chapter I (Parts 0-199)—Nuclear Regulatory Commission—Continued

Each of the following documents is available for inspection at the Nuclear Regulatory Commission's Library, 7920 Norfolk Avenue, Bethesda, Maryland. The individual documents are available through the sources listed below.

#### CFR Citation

#### American Society for Testing Materials (ASTM)

1916 Race Street, Philadelphia, Pennsylvania 19103

ASTM E-185-73 and E-185-79 Standard Recommended Practice for Part 50, App. H, II.B  
Surveillance Tests for Nuclear Reactor Vessels.

#### U.S. Department of Commerce National Technical Information Service

5285 Port Royal Road, Springfield, Virginia 22161

Baker-Just, "Studies of Metal Water Reactions at High Temperatures, Part 50, App. K,  
III. Experimental and Theoretical Studies of the Zirconium-Water I.A.5  
Reaction," ANL-6548, page 7, May 1962.

"PWR FLECHT (Full Length Emergency Cooling Heat Transfer) Final Part 50, App. K,  
Report," Westinghouse Report WCAP-7665, April 1971. I.D.5

#### Federal Specifications

Naval Publications and Forms Center, 5801 Tabor Road, Philadel-  
phia, PA 19120

GSA Interim Federal Specification W-A-00450B (GSA-FSS): Alarm 73.50  
Systems, Interior, Security, Components For.

#### General Electric Company

Nuclear Energy Business Group, Technical Support Services, MC-  
211, 175 Curtner Avenue, San Jose, CA 95125

"Loss-of-Coolant Accident and Emergency Core Cooling Models for Part 50, App. K,  
General Electric Boiling Water Reactors," General Electric Company I.D.7.c  
Report NEDO-10329, April 1971.

#### International Atomic Energy Agency (IAEA)

(Available from: Assistant Director for Export/Import and Interna-  
tional Safeguards, Office of International Programs, Nuclear Regula-  
tory Commission, Washington, DC 20555)

IAEA INFCIRC/225 Rev. 1, "The Physical Protection of Nuclear Mate- 110.43(a)(1)  
rial".

#### Institute of Electrical and Electronic Engineers (IEEE)

United Engineering Center, 345 East 47th Street, New York, New  
York 10017

IEEE-279, "Criteria for Protection Systems for Nuclear Generating 50.55a(h)  
Stations," dated August 30, 1966 and June 3, 1971.

#### National Rifle Association (NRA)

Competitions & Training Division, 1600 Rhode Island Avenue, N.W.,  
Washington, D.C. 20036

NRA Target Manufacturers Index, December 1976 ..... Part 73, App. B,  
IV.C.2-n.2

#### Nuclear Regulatory Commission

Office of Standards Development, Washington, DC 20666

Regulatory Guide 8.15 "Acceptable Programs for Respiratory Protec- 20.103(c)  
tion" October, 1976.





## FEDERAL EMERGENCY MANAGEMENT AGENCY

### National Radiological Emergency Preparedness/Response Plan for Commercial Nuclear Power Plant Accidents (Master Plan)

**AGENCY:** Federal Emergency  
Management Agency.

**ACTION:** Publication of the Master Plan  
for Interim Use and Public Comment.

**SUMMARY:** This plan is in response to a legislative mandate for expeditious, efficient and coordinated action by appropriate Federal agencies to protect the public health and safety in case of accidents at commercial nuclear power plants. This Master Plan, prepared with assistance from the Systems Research and Applications Corporation under contract to FEMA, includes an overview of how the Federal response to such an accident would be managed, assigns responsibilities to Federal agencies expected to be involved, and provides guidance on the preparation of agency plans for carrying out their assigned responsibilities. In its present form, the Master Plan would be the basis for a Federal response to a nuclear power plant accident. It is, however, only the first step in the development of a comprehensive plan which will be achieved with the preparation of agency plans and their coordination and consolidation by FEMA. The Master Plan calls for the completion of these agency plans within four months from the date of this promulgation. During the development of the Master Plan, the contractor and FEMA staff members have sought the views and obtained concurrence on drafts from the staffs of agencies involved. It is, therefore, published here for interim use by these agencies and FEMA.

**DATES:** Comments on the Master Plan are encouraged. Such comments will be considered in any revision to the Master Plan and in the preparation of agency implementing plans. Comments are due February 6, 1981.

**ADDRESS:** Send comments to Rules  
Docket Clerk, Federal Emergency  
Management Agency, 1725 I Street,  
N.W., Room 801, Washington, D.C.  
20472.

**FOR ADDITIONAL INFORMATION CONTACT:**  
Marshall E. Sanders, Assistant Director,  
Policy Planning, Radiological Emergency  
Preparedness Division, Federal  
Emergency Management Agency, 1725 I  
Street, N.W., Washington, D.C. 20472,  
telephone: (202) 523-1718.

**SUPPLEMENTARY INFORMATION:** The  
Nuclear Regulatory Commission

## GENERAL NOTICES

Appropriation Authorization (Pub. L. 96-295, June 30, 1980), Sec. 304, requires that the President prepare and publish a National Contingency Plan which would provide for an expeditious, efficient and coordinated Federal response to an accident at a commercial nuclear power plant. In Executive Order 12241, the President delegated responsibility for preparation of this plan to the Director, FEMA, and directed that the plan be published in the **Federal Register** periodically. In order to make the title more descriptive of the purpose and content, the plan is called the **National Radiological Emergency Preparedness/Response Plan for Commercial Nuclear Power Plant Accidents**.

Dated: December 13, 1980.

John W. Macy, Jr.,  
Director.

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- IV. Assignment of Responsibilities
  - A. Introduction
  - B. General Responsibilities
  - C. Agency Responsibilities
- V. Policy and Planning Guidance
  - A. Policy Guidance
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- VI. Development and Maintenance
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### National Radiological Emergency Preparedness/Response Plan For Commercial Nuclear Power Plant Accidents (Master Plan)

#### I. Purpose

An efficient and effective Federal response to a peacetime radiological accident at a commercial nuclear power plant will depend, in large measure, on the success of prior planning and preparedness. Such planning and preparedness requires a systematic, coordinated approach at the national level.

This Master Plan is the core of the National Radiological Emergency Preparedness/Response Plan for Commercial Nuclear Power Plant Accidents. Its purpose is threefold:

- Provide a framework for Federal radiological emergency planning by describing the management of a coordinated Federal response to nuclear accidents at commercial nuclear power plants and by describing the necessary coordination and interface of the Federal response with that of State/local governments and the licensee.

- Assign responsibilities to Federal agencies for radiological emergency planning, preparedness and response.
- Provide policy and planning guidance for development of the detailed implementation plans required of each Federal agency assigned responsibilities in this Master Plan.

This Plan does not apply to:

- Accidents involving nuclear weapons;
- Accidents at Department of Defense (DoD) or Department of Energy (DOE) facilities;
- Acts of sabotage or terrorism; or,
- Transportation accidents involving radioactive material.

The promulgation of this Master Plan is the first step in developing an integrated National Radiological Emergency Preparedness/Response Plan For Commercial Nuclear Power Plant Accidents. The second step is the preparation of detailed agency implementation plans describing the procedures, organizations, capabilities and interfaces each Federal agency intends to use to fulfill its responsibilities assigned by this Master Plan. The completed agency implementation plans will be submitted to the Federal Emergency Management Agency (FEMA) within four months from the date of promulgation of this Master Plan. FEMA will review the agency implementation plans and, working with each agency, will integrate them and this Master Plan into a comprehensive National Radiological Emergency Preparedness/Response Plan for Commercial Nuclear Power Plant Accidents.

#### II. Background and Assumptions

##### A. Background

On December 7, 1979, the President, in response to the recommendations of *The President's Commission on the Accident at Three Mile Island*, directed that FEMA assume lead responsibility for all Federal off-site nuclear emergency planning and response. Additionally, the President, in Executive Order 12241, delegated to FEMA the responsibility for the development and promulgation of this Plan, to be prepared in response to the provisions of Sec. 304 of the Nuclear Regulatory Commission (NRC) Appropriation Authorization (Pub. L. 96-295—June 30, 1980), which requires the President to prepare and publish a National Contingency Plan to provide for expeditious, efficient, and coordinated action by appropriate Federal agencies to protect the public health and safety in case of accidents at commercial nuclear power plants.

This Plan deals with Federal off-site preparedness for and response to an accident at a commercial nuclear power

## GENERAL NOTICES

plant. The Federal on-site response is the responsibility of the NRC and is not addressed here, except to the extent that on-site activities must be coordinated with the off-site response. The NRC Appropriation Authorization also directed the NRC to prepare an agency plan for responding to accidents at nuclear power plants.<sup>1</sup> This plan will be integrated into the National Radiological Emergency Preparedness/Response Plan for Commercial Nuclear Power Plant Accidents.

### B. Assumptions

The following major assumptions are basic to this Plan.

1. The Federal role in off-site response is one of assisting State officials who have asked for Federal aid because they have determined that they have insufficient technical and/or logistical resources to cope adequately with the off-site consequences of a nuclear accident at a commercial nuclear power plant in their State or in a neighboring State. Federal agencies can assume that State/local agencies have radiological emergency plans to cover their functional responsibilities and that the State/locality will assume the overall management of the off-site response.<sup>2</sup>

2. Legislative or executive authorities enabling the Federal Government to respond to a peacetime radiological emergency either currently exist or will be acquired. In addition, FEMA will assist Federal agencies in budgeting or seeking reimbursement for the costs of responding to accidents at commercial nuclear power plants.

3. The President, if requested by the Governor of the affected State, can declare an "Emergency" or "Major Disaster" under the provisions of the Federal Disaster Relief Act of 1974 (Pub. L. 93-288). However, the responsibilities and functions of the various Federal agencies as described in this Master Plan would be essentially the same whether or not such declaration is made.

### III. Management Overview

This section describes the management of the Federal off-site response to radiological accidents at commercial nuclear power plants. It includes notification procedures and a generalized description of the interaction between the Federal response and that of the States. It does not, however, describe the management

of the State response as that may vary substantially from State to State. Because the Federal off-site response is provided to assist the States as opposed to managing the off-site response to the accident, Federal agency plans must be sufficiently flexible to adapt to the needs of the individual States.

#### A. Response Management

Management of the Federal response requires the coordination of a number of Federal agencies with each other and with appropriate State and local authorities. It begins with the realization that a Federal response has two components: Technical (primarily radiological) and non-technical. No one Federal agency has the capability to effectively coordinate both components alone, hence, this responsibility will be shared by the NRC, DOE and FEMA. The NRC, with its responsibility for licensing and regulating the utility, is in the best position to understand conditions at the facility and to assimilate and interpret the vast amount of technical data derived from on- and off-site instrumentation. The NRC, therefore, will be responsible for technical coordination of the Federal response. For the purposes of this Plan, "technical" refers to all aspects of radiological monitoring, evaluation, assessment and reporting, the application of sophisticated technology to control or predict the impact of radiological contamination, and the use of all available instrumentation to develop recommendations for protective measures for the affected population and the decontamination of property. The NRC will prepare appropriate recommendations for protective measures for State and local officials, including the governors and local chief

executives. Such recommendations will reflect all substantive dissenting views from other Federal agencies and the licensee and will be presented jointly with FEMA. Direct contact between the NRC and State/local officials is to be expected if imminent peril to the public health and safety exists and time does not permit a coordinated recommendation.

FEMA will coordinate all non-technical aspects of the Federal response. For the purposes of this Plan, "non-technical" support refers to all types of assistance to Federal and State/local organizations, such as transportation, communications and housing, assistance to State/local agencies in implementing protective measures, and all other types of assistance not classified as technical. As shown in Figure 1, the NRC, DOE and FEMA have complementary roles and, therefore, require a close working relationship with each other during an emergency.

1. *Technical Support.* Federal technical support is a combination of the on- and off-site radiological monitoring and assessment activities and an evaluation of the conditions of the nuclear power plant. DOE will coordinate all off-site radiological monitoring, evaluation, assessment and reporting activities of participating Federal agencies. DOE will be responsible for supplying this information to the NRC's Director of Site Operations (DSO), other appropriate Federal agencies and to the appropriate State/local agency. Radiological data collected by the licensee for the NRC will be furnished to DOE's Off-Site Technical Director to be included in his evaluation of off-site radiological conditions.

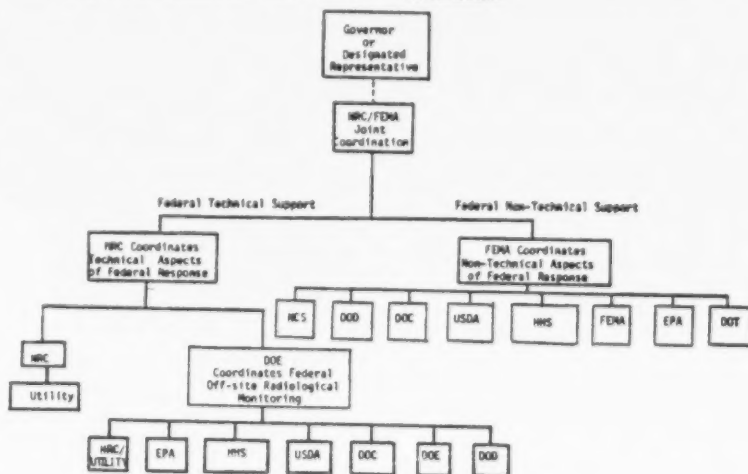


Figure 1: Federal Response Management Diagram

<sup>1</sup> Report to Congress: NRC Incident Response Plan, NUREG-0728, September 1980.

<sup>2</sup> Although Federal assistance will be requested by the State, it is recognized that in some States the local government has primary responsibility for managing the accident with the State assisting their efforts.

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The four categories are:

- **Unusual Event**—Events are in process or have occurred which indicate a potential degradation of the level of safety of the plant.
- **Alert**—Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant.
- **Site Area Emergency**—Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public.
- **General Emergency**—Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity.

Each category initiates a specific notification scheme which, in each case, includes the NRC. State and local agencies are to be notified by the licensee as well as by the NRC.

Once notified, the NRC will evaluate the situation and determine the appropriate NRC response. If the situation requires the activation of NRC's Executive Team (ET), the NRC will also notify:

- Headquarters, Department of Energy (DOE);
- Headquarters, Federal Emergency Management Agency (FEMA);
- Headquarters, Environmental Protection Agency (EPA); and
- Headquarters, Department of Health and Human Services (HHS).

This notification may be an alert or warning of a potential requirement for Federal action or it may specify immediate requirements for Federal assistance. Subsequent notification of other Federal agencies by FEMA and DOE will be determined by the situation (See Figure 3). Federal agencies notified of an accident and the potential requirement for their assistance should take all necessary preparatory steps to enable them to respond promptly and efficiently. Federal assistance will be sent to the affected State(s) when assistance is requested by the Governor or his designated representative.<sup>4</sup>

### C. Emergency Facilities

Pursuant to the NRC's NUREG 0696 (Functional Criteria for Emergency

Response Facilities), the licensee is required to provide and maintain two

facilities to support emergency management of an accident.

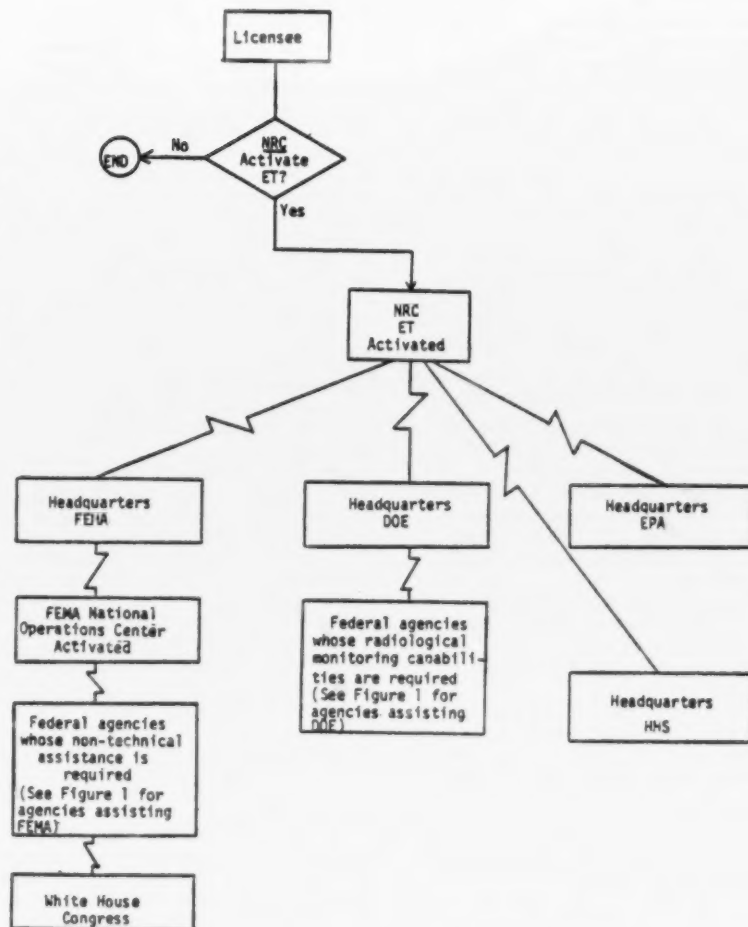


Figure 3: Federal Notification Scheme

<sup>4</sup> Any Federal activity, which is conducted outside of this Plan and without a State request, in response to statutory responsibilities should be coordinated with the appropriate State/local agencies.

- **Technical Support Center (TSC)**—The emergency response facility located at the plant will be used by plant

management, technical support staff, plant operators and the NRC to manage their response to the accident. The TSC

## GENERAL NOTICES

responsibilities of these three agencies are listed first, and are followed in alphabetical order by the other major supporting Federal agencies.

A number of Federal agencies have responsibilities that are totally independent of the type of emergency, e.g., their role is the same for radiological emergencies as for hurricanes, earthquakes, etc. A prime example is the Small Business Administration (SBA). The SBA is responsible for providing low interest loans to cover loss of property or means of livelihood in a disaster. Because this National Radiological Emergency Preparedness/Response Plan For Commercial Nuclear Power Plant Accidents is focused on those responsibilities unique to an accident at a commercial nuclear power plant, it does not include responsibilities such as those of the SBA.

### B. General Responsibilities

The following responsibilities are applicable to all Federal agencies identified in this Master Plan.

1. Ensure that the lead FEMA official coordinating the Federal response is kept informed of all Federal agency activities, including State and local interfaces.

2. Ensure that all radiological monitoring activities of those agencies possessing such capability are coordinated with DOE's Off-Site Technical Director.

3. Develop, evaluate and maintain detailed implementation plans which describe the procedures, organization, interfaces and capabilities that will be used to fulfill agency responsibilities assigned in this Master Plan. These plans should include communications and public information in accordance with this Master Plan.

4. Plan for and implement any response organizations or teams that may be required to execute radiological accident responsibilities.

5. Ensure that adequate resources are maintained to carry out agency responsibilities.

6. Coordinate detailed implementation plans with all Federal agencies with which interaction during an accident is likely.

7. Submit coordinated agency plans to FEMA for integration into the National Radiological Emergency Preparedness/Response Plan For Commercial Nuclear Power Plant Accidents.

8. Establish procedures and propose any legislation and emergency action documents required to execute detailed agency implementation plans.

### C. Agency Responsibilities

#### Federal Emergency Management Agency (FEMA).—

1. Serve as the primary point of contact for requests for Federal assistance from State and local officials and other Federal agencies.

2. Provide a lead official to coordinate and ensure the provision of appropriate non-technical assistance, including telecommunications support, requested by Federal, State and local agencies.

3. Serve as the primary point of contact and coordination between the NRC and other Federal agencies for non-technical response activities.

4. Coordinate the dissemination of all public information concerning Federal non-technical emergency response activities and ensure that public information releases are coordinated with State/local authorities and the NRC. Establish an interagency public affairs group.

5. Develop procedures to facilities reimbursement of Federal agencies for resources expended in responding to a radiological accident.

6. Review and integrate all Federal agency implementation plans to ensure that all required actions and interfaces are adequately addressed.

7. Prepare for and make arrangements with Canada and Mexico, in cooperation with the NRC and the State Department, for responding to radiological accidents which may occur in proximity to the Canadian and Mexican borders, respectively.

#### Nuclear Regulatory Commission (NRC).—

1. Coordinate the technical response activities of the licensee, DOE and other Federal agencies.

2. Provide technical advice to State/local agencies.

3. Develop for State and local agencies a Federal technical recommendation on protective measures which reflects all substantive dissenting views of other Federal agencies and the licensee. Participate with the lead FEMA official in discussing Federal recommendations for protective measures with appropriate State/local officials, except in situations of imminent peril to the public health and safety where the NRC may be required to make direct contact with the appropriate State/local officials regarding recommendations for protective measures.

4. Ensure that the NRC's radiological monitoring activities are coordinated with DOE's Off-Site Technical Director.

5. Coordinate the release of public information concerning the Federal technical response, including the status of the reactor, radiological monitoring activities and other Federal technical

support and ensure that such releases are coordinated with the State(s), FEMA and the licensee.

6. Assess the nature and extent of the radiological accident and the potential off-site consequences to the health and safety of the public.

7. *Department of Energy.*—1. Coordinate the off-site radiological monitoring, assessment, evaluation, and reporting activities of all Federal agencies during the initial phases of an accident, and maintain a technical liaison with State and local agencies with similar responsibilities. Ensure the orderly transfer of responsibility for coordinating the intermediate and long-term radiological monitoring function to EPA after the initial phases of the emergency at a mutually agreeable time.

2. Provide the personnel, including the Off-site Technical Director, and equipment required to coordinate and perform the off-site radiological monitoring and evaluation activities.

3. Assist the NRC in assessing the accident potential and in developing technical recommendations on protective measures.

4. Maintain a common set of all off-site radiological monitoring data and provide this data and interpretation to the NRC and to appropriate State and local agencies requiring direct knowledge of radiological conditions.

5. Provide consultation and support services to all other entities (e.g. private contractors) having radiological monitoring functions and capabilities.

6. Assist HHS and other Federal, State and local agencies by providing technical and medical advice concerning treatment of radiological contamination.

7. Provide telecommunications support and interface with Nuclear Emergency Search Team (NEST) capabilities as provided for by existing NRC/DOE agreements.

8. Assist other Federal agencies in developing and establishing guidelines on effective systems of emergency radiation detection and measurement, including instrumentation.

9. Review and integrate agency radiological monitoring plans into the Federal Radiological Monitoring and Assessment Plan.\*

#### Department of Agriculture (USDA).—

1. Assist the NRC, in coordination with HHS, in developing technical recommendations for State and local officials regarding protective measures related to food and animal feed.

2. Assist State and local officials, in coordination with HHS, on the

\* This Plan, still in draft form, is intended to replace the Interagency Radiological Assistance Plan (IRAP).



## GENERAL NOTICES

11. Provide for the identification, procurement, maintenance and storage of necessary equipment and supplies.

12. Ensure that emergency supplies, equipment and facilities developed or purchased are compatible with each other and that personnel are adequately trained to use them.

13. Identify an individual to be the point of contact regarding the National Radiological Emergency Preparedness/Response Plan for Commercial Nuclear Power Plant Accidents and agency implementation plan development and maintenance.

### VI. Development and Maintenance

The Federal Emergency Management Agency is responsible for the development and maintenance of the National Radiological Emergency Preparedness/Response Plan For Commercial Nuclear Power Plant Accidents. FEMA will consolidate the agency implementation plans into a comprehensive Plan. FEMA will identify all responsibilities that are not adequately addressed and all Federal and State/local interfaces that are not covered. Problems identified, such as gaps or overlaps, will be brought to the attention of the agencies concerned and will be resolved by mutual agreement.

It is anticipated that this planning effort will be highly iterative. From the beginning, as agency plans are being developed, it is expected that new interfaces will be identified and new responsibilities will be added, deleted, or transferred among agencies.

Similarly, internal testing and annual Federal exercises will reveal problems in this Master Plan, in the individual agency plans and in the National Radiological Emergency Preparedness/Response Plan For Commercial Nuclear Power Plant Accidents as a whole, which will need to be addressed.

When a Federal agency participating in the National Radiological Emergency Preparedness/Response Plan For Commercial Nuclear Power Plant Accidents makes a change to its Plan, FEMA should be advised. FEMA will then advise affected agencies of the changes and assist in the resolution of any difficulties arising therefrom. Each agency, depending upon the extent of its involvement in radiological emergency planning should institute a periodic review of its internal organization and procedures. FEMA will conduct an annual review of the plans.

### VII. Authorities

The authorities cited below are those laws that provide the basis for the National Radiological Emergency Preparedness/Response Plan For

### Commercial Nuclear Power Plant Accidents.

#### Public Laws

Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)  
 Disaster Relief Act of 1974, as amended (Pub. L. 93-288)  
 Defense Production Act of 1950 (50 U.S.C. 2251)  
 Public Health Service Act of 1944 (42 U.S.C. 241)  
 Radiation Control for Health and Safety Act of 1968 (42 U.S.C. 241)  
 Federal Water Pollution Control Act of 1948 (22 U.S.C. 406) as amended (13 U.S.C. 1151)  
 Federal Food, Drug and Cosmetic Act of 1939, as amended (21 U.S.C. et seq.)  
 Energy Reorganization Plan of 1974 (42 U.S.C. 5801)  
 Federal Power Act of 1955 (16 U.S.C. 824 et seq.)  
 Federal Civil Defense Act of 1950 (50 U.S.C. 2251)  
 Clean Air Act of 1970, as amended (42 U.S.C. 1857)  
 Interstate Commerce Act of 1887, as amended (49 U.S.C. 303)  
 Agricultural Act of 1949, as amended (7 U.S.C. 1427)  
 Clean Water Act of 1977, as amended (33 U.S.C. 1251)  
 Air Pollution Research and Technical Assistance Act of 1955 (42 U.S.C. 1857)  
 National Security Act of 1947, as amended (Pub. L. 80-253)  
 Consolidated Farmers Home Administration Act of 1961, as amended (Pub. L. 87-128)  
 Explosives and Combustibles Act of 1948 (16 U.S.C. 831 et seq.)  
 Federal Radiation Protection Act of 1946 (42 U.S.C. 2021(a))  
 NRC Appropriation Authorization (Pub. L. 96-295—June 30, 1980)

#### Executive Orders

10014 Cooperation in Preventing Pollution of Surface and Ground Waters  
 10173 Safeguarding of U.S. Vessels, Harbors, Ports, and Water Front Facilities  
 10529 State and Local Civil Defense Pre-emergency Training Program  
 10779 Cooperation with State and Local Authorities in Prevention of Pollution of the Atmosphere  
 12127 Federal Emergency Management Agency  
 12148 Federal Emergency Management Agency  
 12241 National Contingency Plan  
 Reorganization Plan No. 1 of 1958  
 Reorganization Plan No. 3 of 1970  
 Reorganization Plan No. 1 of 1973  
 Reorganization Plan No. 3 of 1973  
 Reorganization Plan No. 4 of 1970  
 Reorganization Plan No. 3 of 1978  
 Reorganization Plan No. 1 of 1980

#### Code of Federal Regulations

Title  
 7 Agriculture  
 9 Animals and Animal Products  
 10 Energy  
 14 Coast Guard  
 15 Weather

18 Conservation of Power and Water Resources  
 21 Food and Drugs  
 23 Highways  
 24 Housing and Urban Development  
 32 National Defense  
 32A National Defense, Appendix  
 33 Navigation and Navigable Waters  
 40 Protection of Environment  
 42 Public Health  
 44 Federal Emergency Management and Assistance  
 45 Public Welfare  
 46 Shipping  
 47 Telecommunications  
 49 Transportation

#### Presidential Statement

Radiological Emergency Preparedness, 12-7-79

#### Formal Agreements

Memorandum of Understanding between NRC and FEMA for Incident Response, October 22, 1980

[FR Doc. 80-36680 Filed 12-22-80; 8:45 am]  
 BILLING CODE 6716-01-M

## GENERAL NOTICES

45 FR 85446  
Published 12/29/80

### DEPARTMENT OF COMMERCE

International Trade Administration  
15 CFR Parts 378 and 399

#### Clarification of Nuclear Non-Proliferation Controls

**AGENCY:** Office of Export Administration, International Trade Administration, Commerce.

**ACTION:** Final rule.

**SUMMARY:** The Export Administration Regulations are revised to clarify that any commodity controlled for national security reasons that is proposed for export for a nuclear related end-use or end-user is also subject to review for nuclear non-proliferation reasons.

**DATE:** Final rule effective December 29, 1980.

**FOR FURTHER INFORMATION CONTACT:** Archie Andrews, Director, Exporters' Service Staff, Office of Export Administration, Room 1817M, U.S. Department of Commerce, Washington, D.C. 20230, Telephone (202) 377-5247 or 377-4811.

**SUPPLEMENTARY INFORMATION:** This rule revises the Export Administration Regulations to clarify the scope of export controls for nuclear non-proliferation reasons. Parts 378 and 399 state that those Commodity Control List entries identified by a "4" in the "Reason for Control" column and exports described in § 378.3 are subject to nuclear non-proliferation review procedures. The interagency review procedures established June 9, 1978 (43 FR 25330), and reprinted as Supplement No. 1 to Part 378 provide for nuclear non-proliferation review of "any other applications which may involve possible nuclear uses . . . ."

Some commodities controlled for national security reasons may also be intended for nuclear end-uses or end-users. However, Parts 378 and 399 do not explicitly state that these

commodities will be subject to review under both nuclear non-proliferation and national security procedures. To avoid ambiguity, the regulations are being revised to provide specifically that applications for any commodities subject to national security export controls may also be subjected to review under nuclear non-proliferation procedures if destined for nuclear related end-users or end-uses.

In addition to the interagency review procedures, this is authorized by section 17(d) of the Export Administration Act of 1979 (Pub. L. 96-72, 50 U.S.C. App. 2401, *et seq.*) (the "Act") which provides that nothing in the national security controls or foreign policy controls sections of the Act shall be construed to supersede the procedures established by the President pursuant to section 309(c) of the Nuclear Non-Proliferation Act of 1978.

Section 13(a) of the Act exempts regulations promulgated under it from the public participation in rulemaking procedures of the Administrative Procedure Act. Because they relate to a foreign affairs function of the United States, it has been determined that these regulations are not subject to Department of Commerce Administrative Order 218-7 (44 FR 2082, January 9, 1979) and the International Trade Administration Administrative Instruction 1-6 (44 FR 2093, January 9, 1979) which implement Executive Order 12044 (43 FR 12861, March 23, 1978, 3 CFR 132 (1979)), "Improving Government Regulations."

For the reasons set forth above, the Export Administration Regulations (15 CFR Parts 378 and 399) are amended as follows:

1. Paragraphs (a) and (b) of § 378.2 are revised to read as follows:

#### § 378.2 Nuclear-related commodities and technical data (The Nuclear Referral List).

(a) *Commodities controlled for nuclear reasons.* Section 309(c) of the Nuclear Non-Proliferation Act of 1978 required the President to publish procedures regarding the control by the Department of Commerce over export items under its jurisdiction that could be, if used for purposes other than for which the export is intended, of significance for nuclear explosive purposes. The commodities listed on the Commodity Control List (§ 399.1) that have the number 4 in the column titled "Reason for Control" have been identified as those that could be of significance for nuclear explosive purposes, and hence are subject to validated licensing and the procedures established under this part and under

section 309(c) of the Nuclear Non-Proliferation Act of 1978. These commodities are referred to as "The Nuclear Referral List." The procedures established pursuant to section 309(c), which originally appeared at 43 FR 25330 (June 9, 1978), are reprinted as Supplement No. 1 to this Part 378. In addition, any item not on the Nuclear Referral List that requires a validated export license for national security reasons and is intended for a nuclear-related end-use or end-user is subject to these procedures. Also, described in § 379.4(c), are certain related technical data that are subject to nuclear non-proliferation controls. The Commodity Control List indicates the countries to which validated licenses are required. Some commodities are controlled for nuclear reasons to all Country Groups, and in certain instances to Canada. For other commodities, the nuclear controls apply to a country only when it is excluded from the list of countries contained in Supplements 2 and 3 of Part 373 of this chapter.

#### (b) *Processing of applications.*

Applications for the export of commodities and technical data described in paragraph (a) of this section will be processed in accordance with the interagency review procedures established pursuant to section 309(c) of the Nuclear Non-Proliferation Act reprinted as Supplement No. 1 to this Part, and the applicable provisions of these Regulations.

2. In § 399.1, paragraph (g)(3) is revised to read as follows:

#### § 399.1 The Commodity Control List and how to use it.

(g) . . . .

(3) *Reason for control.* The reason for control for each entry is specified in the last column,<sup>1</sup> using the following number code—

| Code number | Reason for control                           |
|-------------|----------------------------------------------|
| 1 . . . . . | National security. <sup>1</sup>              |
| 2 . . . . . | Short supply. <sup>2</sup>                   |
| 3 . . . . . | Foreign policy. <sup>3</sup>                 |
| 4 . . . . . | Nuclear non-proliferation. <sup>4</sup>      |
| 5 . . . . . | Crime control (foreign policy). <sup>5</sup> |

<sup>1</sup> In accordance with sections 5(c)(1) and 6(h) of the Export Administration Act of 1979.

<sup>2</sup> Export Administration Act of 1979, section 5, Pub. L. 96-72, 90 Stat. 507, 50 U.S.C. app. § 2404.

<sup>3</sup> Export Administration Act of 1979, section 7, Pub. L. 96-72, 90 Stat. 515, 50 U.S.C. app. § 2406. Other statutes controlling petroleum and other commodities include: Energy Policy and Conservation Act, section 103, Pub. L. 94-163, 89 Stat. 877, 42 U.S.C. 6212; Trans-Alaska Pipeline Authorization Act, section 101, Pub. L. 93-153, 87 Stat. 578, amending 30 U.S.C. 185; Naval Petroleum Reserves Production Act of 1978, section 201(10), Pub. L. 94-258, 90 Stat. 309, amending 10 U.S.C. § 7439.

<sup>4</sup> Export Administration Act of 1979, section 6, Pub. L. 96-72, 90 Stat. 513, 50 U.S.C. app. § 2405.

<sup>5</sup> Export Administration Act of 1979, section 5, 6 and 17(d), Pub. L. 96-72, 90 Stat. 507, 50 U.S.C. app. § 2416(d); Nuclear Non-Proliferation Act of 1978, section 309(c), Pub. L. 95-242, 92 Stat. 141, 42 U.S.C. 2139a.

<sup>6</sup> Export Administration Act of 1979, section 6(f), Pub. L. 96-72, 90 Stat. 515, 50 U.S.C. app. 2405(f).

## GENERAL NOTICES

In some cases, more than one reason for control is given for one entry. If an entry is controlled for more than one reason, but not to an identical list of countries, the lesser degree of control is explained in a footnote. Also, all entries (except those showing "none" in the "Validated License Required" column) are controlled for foreign policy reasons to Country Groups S and Z due to certain embargo programs, and all entries having both a "V" in the "Validated License Required" column and a "1" in the Reason for Control" column are controlled for foreign policy reasons to Syria, Iraq, Libya, and the People's Democratic Republic of Yemen. Applications involving entries having a "1" but not having a "4" in the "Reason for Control" column are subject to nuclear non-proliferation controls if the end-use or end-user is nuclear related. (See § 378.2) In some cases, sub-entries of a CCL entry are controlled for different reasons. In these cases, a dash (—) will be shown in the first line of the entry, and the code number is shown in the "Reason for Control" column exactly opposite each sub-entry (a), (b), etc. (For example, see CCL entry No. 1110.)

(Secs. 13, 15, 17, and 21, Pub. L. 90-72, 50 U.S.C. App. 2401, *et seq.*; E.O. 12214 (45 FR 29763, May 6, 1980); sec. 309(c), Pub. L. 95-242, 42 U.S.C. 2139(a); Department Organization Order 10-3 (45 FR 6141, January 25, 1980), and International Trade Administration Organization and Function Orders 41-1 (45 FR 11862, February 22, 1980) and 41-4, effective August 26, 1980)

Dated: December 18, 1980.

Kent N. Knowles,  
Director, Office of Export Administration,  
International Trade Administration.

Support of Nuclear Power Plants," was issued for interim use and comment. Comments have been received and evaluated. The Nuclear Regulatory Commission and the Federal Emergency Management Agency have used the comments in revising the document. The revision process included close coordination with State and local planning groups.

As a result, Revision 1 of NUREG-0654/FEMA-REP-1 was published in November 1980. Wide distribution is being made to industry and to State and local officials who are responsible for radiological emergency planning and preparedness. This document is consistent with NRC and FEMA regulations and supersedes other previous guidance and criteria published by FEMA and NRC on this subject. It will be used by reviewers in determining the adequacy of State, local, and nuclear power plant licensee emergency plans and preparedness.

Single copies of this document are available free, to the extent of supply, by writing to the Director, Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555; or to Headquarters, Federal Emergency Management Agency, 1725 I Street NW., Washington, D.C. 20472, Attention: Administrative Services Division. Copies will also be available for review in the NRC Public Document Room, Washington, D.C.; the local NRC Public Document Rooms; at FEMA Headquarters, Administrative Services Division; and the FEMA Regional Offices.

Dated at Washington, D.C., this 17th day of December 1980.

For the Nuclear Regulatory Commission.

E. Kevin Cornell,

Deputy Executive Director for Operations.

For the Federal Emergency Management Agency.

Frank A. Camm,

Associate Director for Plans and Preparedness.

### NUCLEAR REGULATORY COMMISSION

### FEDERAL EMERGENCY MANAGEMENT AGENCY

#### Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants (NUREG-0654/ FEMA-REP-1, Rev. 1)

In January 1980, NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in

➤ 45 FR 85862

Published 12/30/80



## POLICY STATEMENTS

1. Failure to make a followup written report as required by 10 CFR 20.402(b), 20.408, and 20.409; or

2. Any other matter, including failure to follow procedures, that has other than minor safety or environmental significance.

F. Severity VI—Violations that have minor safety or environmental significance.

### Supplement V.—Severity Categories

#### Transportation

A. Severity I—Violations of NRC transportation requirements involving:

1. Radiation exposure of a member of the public in excess of 0.5 rems of radiation; or

2. Loss of package integrity resulting in surface contamination or external radiation levels in excess of ten (10) times the NRC or Department of Transportation (DOT) limits.

B. Severity II—Violations of NRC transportation requirements involving:

1. Loss of package integrity resulting in surface contamination or external radiation levels in excess of NRC or DOT requirements;

2. Surface contamination or external radiation levels in excess of three times NRC or DOT limits that did not result from a breach of package integrity; or

3. Failure to make required initial notifications associated with Severity Level I or II violations.

C. Severity III—Violations of NRC transportation requirements involving:

1. Breach of package integrity;

2. Surface contamination or external radiation levels in excess of, but less than a factor of three above NRC or DOT requirements, that did not result from a breach of package integrity;

3. Any noncompliance with labelling, placarding, shipping paper, packaging, loading, or other requirements that could reasonably result in the following:

a. Improper identification of the type, quantity, or form of material;

b. Failure of the carrier or recipient to exercise adequate controls; or

c. Substantial potential for personnel exposure or contamination; or

4. Failure to make required initial notification associated with Severity Level III violations.

D. Severity IV—Violations of NRC transportation requirements involving:

1. Any noncompliance involving package selection or preparation requirements which does not result in a breach of package integrity or surface contamination or external radiation levels in excess of NRC or DOT requirements.

2. Failure to follow procedures; or inadequate procedures, not covered in

Severity Level I, II, or III violations; that reduces the margin of safety; or

3. Inadequate review or failure to make a review in accordance with 10 CFR Part 21.

E. Severity V—Other violations, such as failure to follow procedures, that have other than minor safety or environmental significance.

F. Severity VI—Violations that have minor safety or environmental significance.

### Supplement VI.—Severity Categories

#### Fuel Cycle Operations

A. Severity I—Violations involving:

1. A nuclear criticality accident; or

2. A system designed to prevent or mitigate a serious safety event not being operable when actually required to perform its design function.

B. Severity II—Violations involving:

1. A system designed to prevent or mitigate a serious safety event being inoperative;

2. Conduct of activities not authorized by the license that have a significant safety implication; or

3. Failure to make an immediate or prompt report required to be made by telephone or other electronic means.

C. Severity III—Violations involving:

1. A degraded system designed to prevent or mitigate a serious safety event (e.g., confinement barriers or criticality controls); or

2. Operation with a technically unqualified or unauthorized person resulting in a reduced margin of safety.

D. Severity IV—Violations involving:

1. Inadequate review or the failure to review activities in accordance with 10 CFR Part 21 or management reviews required by the license that are not performed or are performed inadequately but that do not result in a Severity Level I, II, or III violation;

2. Any operation limit not covered by Severity Level I, II, or III violations being exceeded;

3. Failure to follow requirements not covered in Severity Level I, II, or III violations, that reduces the margin of safety; or

4. Failure to make a required 30-day report.

E. Severity V—Other violations, such as failure to follow procedures, that have other than minor safety or environmental significance.

F. Severity VI—Violations that have minor safety or environmental significance.

### Supplement VII.—Severity Categories

#### Materials Operations

A. Severity I—Violations involving:

1. A technically unqualified or unauthorized person conducting a licensed activity that results in radiation levels, contamination levels, or releases that exceed 10 times the limits specified in the license;

2. Use of unauthorized equipment that results in radiation levels, contamination levels, or releases that exceed 10 times the limits specified in the license;

3. Possession or use of unauthorized materials requiring a license, that results in radiation levels, contamination levels, or releases that exceed 10 times the limits specified in the license;

4. Failure to perform required surveys, tests or evaluations, or to institute required safety precautions that results in radiation levels, contamination levels, or releases that exceed 10 times the limits specified in the license; or

5. A system designed to prevent or mitigate a serious safety event not being operable when actually required to perform its design function.

B. Severity II—Violations involving:

1. A technically unqualified or unauthorized person conducting a licensed activity that results in radiation levels, contamination levels, or releases in excess of license limits;

2. Possession or use of unauthorized equipment or material in the conduct of licensed activities that results in radiation levels, contamination levels, or releases that exceed limits specified in the license.

3. Failure to perform required surveys, tests, or evaluations that results in radiation levels, contamination levels, or releases that exceed the limits specified in the license.

4. Failure to make required initial notifications associated with Severity Level I or II violations; or

5. A system designed to prevent or mitigate a serious safety event being inoperative.

C. Severity III—Violations involving:

1. Failure to control access to licensed materials for radiation purposes as specified by NRC requirements;

2. Possession or use of unauthorized equipment or materials in the conduct of licensee activities;

3. Procurement of radioactive material for human use where such use is not authorized;

4. Conduct of licensed activities by a technically unqualified or unauthorized person;

5. Failure to make required initial notifications associated with Severity Level III violations; or

6. Degradation of a system designed to prevent or mitigate a serious safety event.

D. Severity IV—Violations involving:



## POLICY STATEMENTS

1. Failure to follow requirements not covered in Severity Level I, II, or III violations that reduce the margin of safety (e.g., failure to determine that a radiographic source is fully retracted after an exposure);

2. Failure to maintain patients containing cobalt-60, cesium-137, or iridium-192 implants hospitalized, to conduct required leakage or contamination tests, or use of improperly calibrated equipment; or

3. Inadequate review or the failure to review activities in accordance with 10 CFR Part 21 or management reviews required by the license that are either not performed or not performed adequately but that do not result in a Severity Level I, II, or III violation.

E. Severity V—Other violations, such as failure to follow procedures, that have other than minor safety or environmental significance.

F. Severity VI—Violations that have minor safety or environmental significance.

45 FR 79819

Published 12/2/80

Comment period extended to 12/24/80

### 10 CFR Ch. I

#### Action Plan Developed as a Result of the Three Mile Island Accident

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Extension of comment period.

**SUMMARY:** The Commission is further extending the comment period on the "NRC Action Plan Developed as a Result of the TMI-2 Accident", NUREG-0660 (45 FR 50613). The initial comment period expired October 28, 1980, and was extended by the Commission to December 12, 1980 (45 FR 76446). This extension is necessary to permit public comment on recent modifications to the Plan.

**DATE:** Comment period expires December 24, 1980.

**ADDRESSES:** Written comments should be sent to the Secretary of the Commission, Attention: Docketing and Service Branch, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

**FOR FURTHER INFORMATION CONTACT:** Mr. Warren Minners, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (phone 301-492-7581).

**SUPPLEMENTARY INFORMATION:** On July 30, 1980, the Commission published the "NRC Action Plan Developed as a Result of the TMI-2 Accident", NUREG-0660 (45 FR 50613). Public comments on the Plan were to be filed by October 28, 1980. This period was later extended to December 12, 1980 (45 FR 76446).

45 FR 80937

Published 12/8/80

Comment period extended to 12/22/80

#### Evaluation of Agreement State Radiation Control Programs; Proposed General Statement of Policy; Extension of Comment Period

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Proposed general statement of policy; extension of comment period.

**SUMMARY:** On October 3, 1980, Commission published for comment in the Federal Register (45 FR 85728) a proposed general statement of policy to adopt the recently revised "Guide for Evaluation of State Radiation Control Programs Under Agreement with the U.S. Nuclear Regulatory Commission Pursuant to Section 274 of the Atomic Energy Act of 1954, As Amended," February 1, 1980. This revised Guide, which was prepared by the NRC staff, incorporates new criteria and guidelines for acceptable practice by Agreement States. The October 3, 1980 notice specified that comments on the proposed general statement of policy were due on or before November 17, 1980. The Commission hereby extends the comment period to December 22, 1980.

**DATE:** The comment period is extended to December 22, 1980.

**ADDRESSES:** All interested persons who desire to submit written comments on this proposed statement of policy should send them to the Director, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Copies of public comments on this proposed policy statement may be examined at the Commission's Public Document Room at 1717 H Street, NW., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** John R. McGrath, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555 (Phone 301-492-7787).

45 FR 85236

Published 12/24/80

#### Statement of Policy; Further Commission Guidance for Power Reactor Operating Licenses

##### Memorandum and Order

Recently the Commission, by a vote of 3-2, issued a Statement of Policy entitled "Further Commission Guidance for Power Reactor Operating Licenses," 45 FR 41730 (June 20, 1980). In essence, the Statement of Policy announced the intent of the Commission that in future actions on nuclear power reactor operating license applications, it would look to the list of "Requirements for New Operating Licenses" found in NUREG-0694 (June 1980) as setting forth requirements for new operating licenses which should be "necessary and sufficient for responding" to the accident at Three Mile Island ("TMI"). Consequently, current operating license applications were to be judged against present NRC regulations, as supplemented by these TMI-related requirements. Insofar as certain of the provisions of NUREG-0694 sought to impose operating license requirements beyond those necessary to show compliance with the regulations:

Although the (licensing and appeal) boards may entertain contentions asserting that the supplementation is unnecessary (in full or in part) and they may entertain contentions that one or more of the supplementary requirements are not being complied with, they may not entertain contentions asserting that additional supplementation is required. *Id.*

On November 3, 1980, by a vote of 2-2, the Commission denied a request for a stay of the Statement of Policy filed by the Union of Concerned Scientists and the Shoreham Opponents Coalition.

On October 28, 1980, by a vote of 4-0, the Commission approved NUREG-0737, "Clarification of TMI Action Plan Requirements," which is a letter from D. G. Eisenhower, Director of the Division of Licensing, NRR, to licensees of operating power reactors and applicants for operating licenses forwarding post-TMI requirements. NUREG-0737 now supersedes NUREG-0694, the latter being the document which forms the core of the substantive requirements in the aforementioned Statement of Policy. NUREG-0737 makes numerous significant changes in NUREG-0694. In some instances, the requirements in NUREG-0694 are made more flexible, especially as to implementation schedules. In some instances, the requirements in NUREG-0694 are made more strict. In addition, NUREG-0737

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adds new requirements, taken from previously issued Bulletins and Orders, which were not part of NUREG-0694.

The Commission's approval of NUREG-0737 requires that some changes be made in the previously adopted Statement of Policy. Moreover, the Commission has now had more time to reflect upon the distinction between interpretive and supplementary requirements, as originally set forth in NUREG-0694 and as modified in NUREG-0737, and believes that the number of supplementary requirements may be quite small. For these reasons, the Commission has decided that the Statement of Policy should be amended as set forth in the Appendix to this Memorandum and Order.<sup>1</sup>

It is so ordered.

Dated at Washington, D.C., this 18th day of December 1980.

For the Commission.

Samuel J. Chalk,

Secretary of the Commission.

### **U.S. Nuclear Regulatory Commission— Further Commission Guidance For Power Reactor Operating Licenses— Revised Statement of Policy\***

#### **I. Background**

After the March-1979 accident at Three Mile Island, Unit 2, the Commission directed its technical review resources to assuring the safety of operating power reactors rather than to the issuance of new licenses. Furthermore, the Commission decided

that power reactor licensing should not continue until the assessment of the TMI accident had been substantially completed and comprehensive improvements in both the operation and regulation of nuclear power plants had been set in motion.

At a meeting on May 30, 1979, the Nuclear Regulatory Commission decided to issue policy guidance addressing general principles for reaching licensing decisions and to provide specific guidance for near-term operating license cases.<sup>1</sup> In November 1979, the Nuclear Regulatory Commission issued the policy guidance in the form of and amendment to 10 CFR Part 2 of its regulations,<sup>2</sup> describing the approach to be taken by the Commission regarding licensing of power reactor. In particular, the Commission noted that it would "be providing case-by-case guidance on changes in regulatory policies." The Commission has now acted on four operating licenses, has given extensive consideration to issues arising as a

result of the Three Mile Island accident, and is able to provide general guidance.

Following the accident at Three Mile Island 2, the President established a Commission to make recommendations regarding changes necessary to improve nuclear safety. In May 1979, the Nuclear Regulatory Commission established a Lessons Learned Task Force,<sup>3</sup> to determine what actions were required for new operating licenses and chartered a Special Inquiry Group to examine all facets of the accident and its causes. These groups have published their reports.<sup>4</sup>

The Lessons Learned Task Force led to NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations" and NUREG-0585, "TMI-2 Lessons Learned Task Force Final Report." The Commission addressed these reports in meetings on September 6, September 14, October 14, and October 16, 1979. Following release of the report of the Presidential Commission the Commission provided a preliminary set of responses to the recommendations in that report.<sup>5</sup> This response provided broad policy directions for development of an NRC Action Plan, work on which was begun in November 1979. During the development of the Action Plan, the Special Inquiry Group Report was received, which had the benefit of review by panels of outside consultants representing a cross section of technical and public views. This report provided additional recommendations.

The Action Plan<sup>6</sup> was developed to provide a comprehensive and integrated plan for the actions judged appropriate by the Nuclear Regulatory Commission to correct or improve the regulation and operation of nuclear facilities based on the experience from the accident at TMI-2 and the official studies and investigations of the accident. In developing the Action Plan, the various recommendations and possible actions of all the principal investigations were assessed and either rejected, adopted or modified. A detailed summary of the development and review process for the Action Plan was initially provided in NUREG-0694,<sup>7</sup> "TMI-Related Requirements For New Operating Licenses," and can now be found, as changed, in NUREG-0737, "Clarification of TMI Action Plan Requirements."<sup>8</sup>

Actions to improve the safety of nuclear power plants now operating were judged to be necessary immediately after the accident and could not be delayed until the Action Plan was developed, although they were subsequently included in the Action Plan. Such actions came from the Bulletins and Orders issued immediately after the accident, the first report of the Lessons-Learned Task Force issued in July 1979, the recommendations of the

Emergency Preparedness Task Force, and the NRC staff and Commission. Before these immediate actions were applied to operating plants, they were approved by the Commission. Many of the required immediate actions have already been taken by licensees and most are scheduled to be completed in the near future.

On February 7, 1980, based on its review of initial drafts of the Action Plan, the Commission approved a listing of near-term operating license (NTOL) requirements, as being necessary but not necessarily sufficient TMI-related requirements, for granting new operating licenses. Since then, the fuel load requirements on the NTOL list have been used by the Commission in granting operating licenses, with limited authorizations for fuel loading and low power testing, for Sequoyah, North Anna, Salem, and Farley. Full operating licenses were granted, based on the NTOL list, for Sequoyah and North Anna.

On May 15, 1980, after review of the last version of the Action Plan, the Commission approved a list of "Requirements For New Operating Licenses," contained in NUREG-0694, which the staff recommended for imposition on current operating license applicants. That list was recast from the previous NTOL list and sets forth four types of TMI-related requirements and actions for new operating licenses: (1) Those required to be completed by a license applicant prior to receiving a

fuel-loading and low-power testing license, (2) those required to be completed by a license applicant to operate at appreciable power levels up to full power, (3) those the NRC will take prior to issuing a fuel-loading and low-power testing or full-power operating license, and (4) those required to be completed by a license prior to a specified date. The Commission also approved the staff's recommendation that the remaining items from the TMI reviews should be implemented or considered over time to further enhance safety.

On October 28, 1980, the Commission approved a "Clarification of TMI Action Plan Requirements," not contained in NUREG-0737, which supersedes NUREG-0694. More explicit requirements, revisions in previous requirements, different time schedules for implementation, and new requirements in NUREG-0694, but taken from previously issued Commission bulletins and orders, form the core of NUREG-0737.

In approving the schedules for developing and implementing changes in requirements, the Commission's primary considerations were the safety significance of the issues and the

<sup>1</sup> Chairman Abearne concurs in amending the policy statement, but disagrees in how it should be amended. His dissenting views are attached to the Appendix.

<sup>2</sup> All footnotes for this Statement of policy appear at end of text.

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immediacy of the need for corrective actions. As discussed above, many actions were taken to improve safety immediately or soon after the accident. These actions were generally considered to be interim improvements. In scheduling the remaining improvements, the availability of both NRC and industry resources was considered, as well as the safety significance of the actions. Thus, the Action Plan approved by the Commission presents a sequence of actions that will result in a gradually increasing improvement in safety as individual actions are completed and the initial immediate actions are replaced or supplemented by longer term improvements.

### II. Commission Decision

Based upon its extensive review and consideration of the issues arising as a result of the Three Mile Island accident—a review that is still continuing—the Commission has concluded that the list of TMI-related requirements for new operating licenses found in NUREG-0737 can provide a basis for responding to the TMI-2 accident. The Commission has decided that current operating license applications should be measured by the NRC staff against the regulations, as augmented by these requirements.<sup>9</sup> In general, the remaining items of the Action Plan should be addressed through the normal process for development and adoption of new requirements rather than through immediate imposition on pending applications.

### III. Litigation of TMI-2 Issued in Operating License Proceedings

In the November 1979 policy statement, the Commission provided the following guidance for the conduct of adjudicatory proceedings:

In reaching their decision, the Boards should interpret existing regulations and regulatory policies with due consideration to the implications for those regulations and policies of the Three Mile Island Accident. In this regard, it should be understood that as a result of analyses still underway, the Commission may change its present regulations and regulatory policies in important aspects and thus compliance with existing regulations may turn out to no longer warrant approval of a license application.

The Commission is now able to give the Boards more guidance.

The Commission believes the TMI-related operating license requirements list as derived from the process described above should be the principal basis for consideration of TMI-related issues in the adjudicatory process. There are good reasons for this. First, this represents a major effort by the staff and Commissioners to address more than one hundred issues and

recommendations in a coherent and coordinated fashion. This entire process cannot be reproduced in individual proceedings. Second, the NRC does not have the resources to litigate the entire Action Plan in each proceeding. Third, many of the decisions involve policy more than factual or legal decisions. Most of these are more appropriately addressed by the Commission itself on a generic basis than by an individual licensing board in a particular case. Consequently, the Commission has chosen to adopt the following policy regarding litigation of TMI-related issues in operating license proceedings.

The "Clarification of Action Plan Requirements" in NUREG-0737, like the TMI-related "Requirements For New Operating Licenses" in NUREG-0694, can, in terms of their relationship to existing Commission regulations, be put in two categories: (1) Those that interpret, refine or quantify the general language of existing regulations, and (2) those that supplement the existing regulations by imposing requirements in addition to specific ones already contained therein. Insofar as the first category—refinement of existing regulations—is concerned, the parties may challenge the new requirements as unnecessary on the one hand or insufficient on the other within the limits of the regulations.

Insofar as the second category—supplementation of existing regulations—is concerned, the parties may challenge either the necessity for or sufficiency of such requirements. It would be useful if the parties in taking a position on such requirements stated (a) the nexus of the issue to the TMI-2 accident, (b) the significance of the issue, and, (c) any differences between their positions and the rationale underlying the Commission's consideration of additional TMI-related requirements. It would be helpful if any certifications of questions regarding such positions to the Commission included the same information and such certifications are encouraged where Boards are in doubt as to the Commission's intentions in approving NUREG-0737. The Atomic Safety and Licensing and Appeal Boards' present authority to raise issues *sua sponte* under 10 CFR 2.760a extends to both categories.

In order to focus litigation of TMI-related issues, the staff and the Boards should use the Commission's existing summary disposition procedures, where applicable, in responding to TMI-related contentions.

The Commission believes that where the time for filing contentions has expired in a given case, no new TMI-related contentions should be accepted absent a showing of good cause and

balancing of the factors in 10 CFR 2.714(A)(1). The Commission expects adherence to its regulations in this regard.

Also, present standards governing the reopening of hearing records to consider new evidence on TMI-related issues should be adhered to. Thus, for example, where initial decisions have been issued, the record should not be reopened to take evidence on some TMI-related issue unless the party seeking reopening shows that there is significant new evidence, not included in the record, that materially affects the decision.

Finally, the Commission will continue to monitor developments with regard to the litigation of our Action Plan requirements and will continue to offer guidance where appropriate.

Dated at Washington, D.C., the 28th day of December 1980.

Samuel J. Chilk,

Secretary of the Commission.

### Footnotes

<sup>1</sup>"Staff Requirements—Discussion of Options Regarding Deferral of Licenses," memorandum from Samuel J. Chilk, Secretary to Lee V. Gosnick, Executive Director for Operations, May 31, 1979.

<sup>2</sup>"Suspension of 10 CFR 2.764 and Statement of Policy on Conduct of Adjudicatory Proceedings," 44 FR 85050 (November 9, 1979).

<sup>3</sup>"Lessons Learned from TMI-2 Accident," Roger Mattson to NRC staff, May 31, 1979.

<sup>4</sup>"Report of the President's Commission on the Accident at Three Mile Island: 'The Need for Change: The Legacy of TMI,'" October 1979.

<sup>5</sup>U.S. Nuclear Regulatory Commission, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations," NUREG-0678, July 1979.

<sup>6</sup>U.S. Nuclear Regulatory Commission, "TMI-2 Lessons Learned Task Force Status Report," NUREG-0688, August 1979.

<sup>7</sup>U.S. Nuclear Regulatory Commission Special Inquiry Group, "Three Mile Island: A Report to the Commissioners and to the Public," January 1980.

<sup>8</sup>U.S. Nuclear Regulatory Commission, "NRC Views and Analysis of the Recommendations of the President's Commission on the Accident at Three Mile Island," NUREG-0632, November 1979.

<sup>9</sup>U.S. Nuclear Regulatory Commission, "NRC Action Plans Developed as a Result of the TMI-2 Accident," NUREG-0660.

<sup>10</sup>U.S. Nuclear Regulatory Commission, "TMI-Related Requirements for New Operating Licenses," NUREG-0694, June 1980.

<sup>11</sup>U.S. Nuclear Regulatory Commission, "Clarification of TMI Action Plan Requirements," NUREG-0737, November 1980.

<sup>12</sup>"Consideration of applications for an operating license should include the entire list of requirements unless an applicant specifically requests an operating license with limited authorization (e.g., fuel loading and low-power testing).

### Chairman Ahearn's Dissenting Views

I now support amending the guidance for litigating TMI-2 issues for the reasons mentioned in the Commission order and below. However, I do not support the Commission's revised statement of policy. Little guidance is provided to either the Board or the parties—they are simply told they can

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litigate whatever they wish and it would be "useful" or "helpful" to address certain questions.

Throughout the development of the TMI Action Plan and the various policy statements, I have believed the Commissioners should play a central role in determining the appropriate response to the TMI-2 accident. Unfortunately the "Revised Statement of Policy" relinquishes Commission control and attention from a major portion of this process. Therefore I would have preferred the following approach:

### **Revised Statement of Policy**

#### ***I. Background***

In June 1980 the Commission issued a Statement of Policy dealing with TMI-related requirements for new operating licenses.<sup>1</sup> This statement outlined the process by which the Commission evaluated the TMI-2 accident and then agreed to a list of requirements to be adopted in response to the accident.<sup>2</sup> It then provided guidance for litigation of TMI-2 issues in operating license proceedings.

Subsequently substantial controversy developed over the statement—particularly over treatment of requirements and issues which go beyond existing regulations. Due in part to this controversy, in part to a change in the composition of the Commission, in part to the uncertain results of ongoing litigation, and in part to confusion created by subsequent Commission statements, the Commission has decided to modify this aspect of the policy statement. In the long run the Commission believes it will save time by modifying its guidance at this juncture.

#### ***II. Modified Commission Guidance of Litigation on TMI-2 Issues in Operating License Proceedings***

In the June Statement of Policy the Commission described the TMI-related requirements as falling into two categories: "(1) Those that interpret, refine or quantify the general language of existing regulations, and (2) those that supplement the existing regulations by imposing requirements in addition to specific ones already contained therein." The Commission is modifying its guidance with respect to the second category. Rather than entirely precluding litigation of requirements that go beyond the regulations (other than those found in the Commission's list of requirements), the Commission will now provide parties an opportunity to certify such questions to the

Commission. To the extent that an issue addresses items within the current regulations, certification is unnecessary since litigation was permissible under the original policy statement. However issues which raise matters going beyond the existing regulations may now be certified directly to the Commission.<sup>3</sup>

A request for certification should clearly present (a) the nexus of the issue to the TMI-2 accident (i.e., in what way does the TMI accident provide a basis for the concerns presented), (b) the

significance of the issue (i.e., what is the consequence of not addressing the issue), (c) to the extent possible, the differences in rationale underlying the certification from the rationale underlying the Commission consideration of additional TMI-related requirements (e.g., different reasoning, incorrect assumptions, incomplete information).

To the extent that a contention raises the need for a requirement already included in the Commission's list of requirements for new operating licenses, certification is necessary. As under the old policy statement, litigation of the need for those requirements is permitted without further action by the Commission. The Commission itself has already found sufficient basis for allowing consideration of those items.

It should be emphasized that this policy statement (as well as the previous policy statement) is intended to address issues arising from the TMI-2 accident. Other issues are to be treated according to normal Commission procedures.<sup>4</sup>

<sup>1</sup>The Licensing Board should certify any such questions directly to the Commission. In the event that a party wishes to request directed certification, the Board should be given a reasonable opportunity to address the certification question prior to Commission action since (a) the Board might rule that the issue is within the existing regulations rendering certification unnecessary and (b) otherwise it would be helpful to have the benefit of the Board's reasoning. See *Toledo Edison Co. (Davis-Besse Nuclear Power Station, Unit 1)*, ALAB-257, 7 NRC 727 (1975).

<sup>4</sup> See e.g., 10 CFR 2.758.

<sup>1</sup>"Further Commission Guidance for Power Reactor Operating Licenses: Statement of Policy," 45 FR 41738 (June 20, 1980).

<sup>2</sup>"TMI-Related Requirements for New Operating Licenses," NUREG-0694 (June 1980) as modified by "Clarification of TMI Action Plan Requirements," NUREG-0737 (Nov. 1980).





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and the progress of state and local governments in establishing emergency response plans (Sec. 1-206); and

- Improving public information on nuclear safety and FEMA's progress in coordinating any Federal response to potential nuclear emergencies (Sec. 1-207).

NSOC's acquisition or inspection of technical, scientific, legal and policy related information in FEMA's possession, the monitoring of FEMA's functions and activities, the availability and responsiveness of FEMA personnel, and NSOC's access to FEMA operated, financed or approved facilities or programs are essential to the effective and timely preparation and submission of its reports (see Sec. 1-208, and 1-304). Additionally, the President has directed NSOC to "include in its reports the Committee's advice as to the adequacy of the information it has received from Federal . . . agencies . . . ; and, its assessment of the cooperation it has received from them." (Sec. 1-201).

2. The Federal Emergency Management Agency, pursuant to Reorganization Plan No. 3 of 1978, Executive Order 12148 of July 20, 1979 and other laws and regulations, is responsible for, and coordinates civil emergency planning, management, mitigation and assistance functions of the executive agencies of the United States, and it works with state and local governments and the private sector to stimulate vigorous participation in civil emergency preparedness, mitigation, response and recovery programs.

In the President's announcement and White House Fact Sheet of December 7, 1979, referred to in paragraph 1 above and attached to this memorandum, the FEMA was directed to, *inter alia*, address the need for improved advance preparation for emergencies and public education programs in the context of state emergency response plans. Specifically, FEMA was directed to: (1) take the lead in off-site emergency planning and response; (2) complete by June 1980 the review of state emergency plans in those states with operating reactors; (3) complete as soon as possible the review of state emergency plans in those states with plants scheduled for operation in the near future; (4) develop and issue an updated series of interagency assignments which would delineate respective agency capabilities and responsibilities and clearly define procedures for coordination and direction for both emergency planning and response; (5) assure that DOE resources and capabilities for responding to radiological emergencies are made available and augmented as needed to

The implementation of this memorandum shall not materially impede or disrupt the operation, routine or regularized conduct of FEMA procedures and programs:

### e. Authority not Affected

Nothing in this memorandum, or in its implementation, or in any subsequent formal or informal arrangement is intended to restrict, modify or limit the authority of FEMA or the responsibility of the NSOC under Executive Order 12202, Executive Order 12240 and other applicable laws:

### f. Classified Documents, Devices or Facilities

Nothing in this memorandum, or in its implementation, is intended to alter, modify or change applicable requirements concerning the personal security clearance of individuals or the informational or physical security of classified documents, devices or facilities;

### g. Responsible Agency Official and the Process of Amendment

The General Counsel of the FEMA and the General Counsel of the NSOC will periodically review the effectiveness of this memorandum of understanding, particularly as it relates to NSOC's fulfillment of its responsibilities under Executive Order 12202 and Executive Order 12240 and develop formal and informal arrangements to correct any impediments, deal with problem areas or resolve disputes. The responsibilities agreed to in this memorandum may be amended by the exchange of letters between the General Counsel of NSOC and the General Counsel of FEMA.

4. This memorandum of understanding shall take effect upon its signing by authorized representatives of the respective agencies.

For the Nuclear Safety Oversight Committee.

Dated: November 7, 1980.

Bruce Babbitt,

Chairman, Nuclear Safety Oversight Committee.

For the Federal Emergency Management Agency.

Dated: October 28, 1980.

John W. Macy, Jr.,

Director, Federal Emergency Management Agency.

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## FEDERAL EMERGENCY MANAGEMENT AGENCY NUCLEAR REGULATORY COMMISSION

### Memoranda of Understanding Between Federal Emergency Management Agency and Nuclear Regulatory Commission

The Nuclear Regulatory Commission (NRC) and the Federal Emergency Management Agency (FEMA) have entered into a Memorandum of Understanding for incident response and they have also entered into a new Memorandum of Understanding relating to Radiological Emergency Planning and Preparedness. The latter memorandum supersedes a memorandum entered into January 14, 1980 (45 FR 5847).

The text of these Memoranda is set out below except that an attachment to the Radiological Emergency Planning and Preparedness Memorandum is not included. This attachment concerns membership on a steering committee.

For Nuclear Regulatory Commission,  
William J. Dircks,

Executive Director for Operations.

For Federal Emergency Management Agency,

George Jett,  
General Counsel.

### Memorandum of Understanding Between NRC and FEMA Relating to Radiological Emergency Planning and Preparedness

#### I. Background and Purpose

This Memorandum of Understanding establishes a framework of cooperation between the Federal Emergency Management Agency (FEMA) and the Nuclear Regulatory Commission (NRC) in radiological emergency response planning matters, so that their mutual efforts will be directed toward more effective plans and related preparedness measures at and in the vicinity of nuclear reactors, fuel cycle facilities which are subject to 10 CFR Part 50, Appendix E, and certain other fuel cycle and materials licensees which have potential for significant accidental offsite radiological releases. The memorandum is responsive to the President's decision of December 7, 1979, that FEMA will take the lead in

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offsite planning and response, his request that NRC assist FEMA in carrying out this role, and the NRC's continuing statutory responsibility for the radiological health and safety of the public.

A separate memorandum has been negotiated to cover NRC/FEMA cooperation and responsibilities in response to an actual emergency including public information activities. In addition, an agreement was also reached between the NRC and FEMA on September 11, 1979, that chairmanship of the Federal Interagency Central Coordinating Committee (now the Federal Radiological Preparedness Coordinating Committee) should be transferred from NRC to FEMA. This agreement was transmitted to other Federal agencies by a joint letter from the Chairman of the NRC and the Director of FEMA. The NRC and FEMA also agreed in principle on September 11, 1979, to the idea of joint participation in the review, assessment and concurrence with regard to State and local emergency response plans. On January 14, 1980, the two agencies entered into a "Memorandum of Understanding Between NRC and FEMA to Accomplish a Prompt Improvement In Radiological Emergency Preparedness" that was responsive to the President's December 7, 1979 statement and was a framework for implementing the September 11, 1979 agreement. According to that memorandum of understanding, FEMA coordinates all Federal planning and takes the lead for developing a program for assessing State and local emergency response plans in all elements of offsite radiological emergency planning, and for making findings and determinations as to the adequacy and capability of implementing State and local plans, and to make those findings and determinations available to NRC. The NRC reviews those FEMA findings and determinations for the purpose of making determinations on the overall state of emergency preparedness for issuance of licenses or shutdown of operating reactors. That arrangement makes the FEMA staff responsible for evaluating the adequacy of State and local plans and for assuring that the plans are capable of implementation on a continuing basis, and therefore substantially avoids duplicative efforts by NRC staff. This memorandum of understanding builds upon the relationship that has been developing between the two agencies and supersedes the January 14, 1980 memorandum.

### II. Authorities and Responsibilities

**FEMA**—Executive Order 12146 charges the Director, FEMA, with establishing policy for and coordinating all civil emergency planning and assistance functions for Executive agencies (Section 2-101). It also provides that "The Director shall represent the President in working with State and local governments and private sector to stimulate vigorous participation in civil emergency preparedness mitigation, response, and recovery programs." (Section 2-104).

On December 7, 1979, the President, in response to the recommendations of the Kemeny Commission on the accident at Three Mile Island, directed that FEMA assume lead responsibility for all offsite nuclear emergency planning and response.

Specifically, the FEMA responsibilities with respect to emergency preparedness as they relate to NRC are:

1. To take the lead in offsite emergency planning and review and assess State and local emergency plans for adequacy.
2. To review State and local emergency plans in those States affected by operating reactors (report submitted to the President in June 1980).
3. To complete, as soon as possible, the review of State and local emergency plans in those States affected by plants scheduled for operation in the near future.
4. To make findings and determinations as to whether State and local emergency plans are adequate and capable of implementation (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications and equipment adequacy). Notwithstanding the procedures which may be set forth in 44 CFR 350 for requesting and reaching a FEMA administrative approval of State and local plans, findings and determinations on the current status of emergency preparedness around particular sites may be requested by the NRC through the NRC/FEMA Steering Committee and provided by FEMA for use as needed in the NRC licensing process. These findings and determinations may be based upon plans currently available to FEMA or furnished to FEMA by the NRC.
5. To assume responsibility for emergency preparedness training of State and local officials.
6. To develop and issue an updated series of interagency assignments which would delineate respective agency capabilities and responsibilities and define procedures for coordination and direction for emergency planning and response.

**NRC**—The Atomic Energy Act of 1954, as amended, requires that the NRC grant licenses only if the health and safety of the public is adequately protected. While the Atomic Energy Act does not specifically require emergency plans and related preparedness measures, the NRC had required consideration of overall emergency preparedness as a part of the licensing process.

10 CFR 50.33, 50.34, 50.47, 50.54, and Appendix E to 10 CFR Part 50 include requirements for the licensee emergency plans. In a Federal Register Notice dated December 24, 1975, entitled "Radiological Incident Emergency Response Planning: Fixed Facilities and Transportation" (40 FR 50494), the Federal Preparedness Agency, a predecessor of FEMA, outlined responsibilities of various Federal agencies in providing assistance to State and local governments in their radiological emergency response planning. Both FEMA and NRC recognize that the these responsibilities have been reevaluated and this will be reflected in the reissuance of that Federal Register Notice.

Specifically, the NRC responsibilities for emergency preparedness are:

1. To assess licensee emergency plans for adequacy.
2. To verify that licensee emergency plans are adequately implemented (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications and equipment adequacy).
3. To review the FEMA findings and determinations on the adequacy and capability of implementation of State and local plans.
4. To make decisions with regard to the overall state of emergency preparedness (i.e., integration of emergency preparedness onsite as determined by the NRC and offsite as determined by FEMA and reviewed by NRC) and issuance of operating licenses or shut down of operating reactors.

### III. Areas of Cooperation

#### A. NRC Licensing Reviews

FEMA will provide support for NRC reactor, fuel facility and material licensing reviews, as requested, with regard to the assessment of the adequacy of State and local response plans for accidental radiological releases. This will include timely submittal of an evaluation suitable for inclusion in NRC safety evaluation reports.

Substantially prior to the time that a FEMA evaluation is required with regard to fuel facility and material license review, NRC will identify those fuel and material licensees with potential for significant accidental offsite radiological releases and for those NRC will submit to FEMA the

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emergency plans as they are completed.

FEMA routine support will include providing assessments of State and local plans related to reactor Construction Permit and Operating License reviews and continuing assessments of State and local plans during the facility lifetime. To support its findings and determinations, FEMA will make expert witnesses available before the Commission, the NRC Advisory Committee on Reactor Safeguards, NRC hearing boards and administrative law judges, any court actions, and during any related discovery proceedings. Nothing in this document shall be construed in any way to diminish NRC's responsibility for protecting the radiological health and safety of the public.

### *B. FEMA Review of State and Local Plans*

NRC will assist in the development and review of State and local plans through its membership on the Regional Assistance Committees. FEMA will chair the Regional Assistance Committees. Consistent with NRC's statutory responsibility, NRC will recognize FEMA as the interface with State and local governments for interpreting radiological emergency preparedness criteria as it affects those governments and for reporting the results of any evaluation of State and local governments' emergency preparedness to those governments.

Where questions arise concerning the interpretation of the criteria, such questions will continue to be referred to FEMA headquarters, and when appropriate to the NRC/FEMA Steering Committee to assure uniform interpretation.

### *C. Evaluation of Exercises*

FEMA and NRC will cooperate in determining exercise requirements for joint licensee, State, local and Federal agencies and will jointly observe and evaluate such exercises. NRC and FEMA will also jointly agree upon a set of exercise scenarios from which the scenario for a particular exercise may be selected.

### *D. Emergency Preparedness Guidance*

NRC has lead responsibility for the development of emergency preparedness guidance for licensees. FEMA has lead responsibility for the development of emergency preparedness guidance for State and local agencies.

NRC and FEMA recognize the need for an integrated assessment of the degree of emergency preparedness by NRC licensees and State and local governments. NRC and FEMA will each, therefore, provide opportunity for the other agency to review and comment on

emergency preparedness guidance prior to adoption as formal agency guidance.

### *E. Support for Automated Information Retrieval Systems*

FEMA and NRC will each provide the other with continued access to those automatic data processing support systems which contain emergency preparedness data developed and/or utilized during the transition period.

At NRC this includes Automated Information Retrieval System (AIREs) support to the extent that it does not affect duplication or records retention. At FEMA this includes technical support to the Radiological Emergency Preparedness Management Information System. This agreement is not intended to include the automated information retrieval support for the national level emergency response facilities.

### *F. Ongoing NRC Programs*

Ongoing NRC and FEMA research and development programs that are related to State and local emergency planning and preparedness will be coordinated.

### *G. Public Information Programs*

FEMA will take the lead in developing public information programs. NRC will assist FEMA by reviewing for accuracy educational materials concerning radiation and its hazards and information regarding appropriate actions to be taken by the general public in the event of an accident involving radioactive materials. Public information activities will be addressed in the MOU dealing with response to actual emergencies.

### *IV. Near-Term Cooperative Measures*

In order to achieve a prompt improvement in the state of emergency preparedness at and around nuclear power facilities, and because of the need for an integrated assessment of the degree of preparedness, FEMA and NRC recognize the need for an especially close working relationship.

The NRC/FEMA Steering Committee on Emergency Preparedness will be the focal point for coordination of emergency preparedness and response activities between the two agencies. The Steering Committee will consist of an equal number of members to represent each agency with one vote per agency. Where the Steering Committee cannot agree on the resolution of an issue, the issue will be referred to NRC and FEMA management. The NRC members will have lead responsibility for licensee preparedness and the FEMA members will have lead responsibility for State and local preparedness. The Steering Committee will coordinate the preparedness evaluation activities and develop upgraded acceptance criteria for licensee, State, and local emergency

preparedness. NRC and FEMA will then consider and adopt criteria, as appropriate, in their respective jurisdictions. (See Attachment 1.)

### *V. Working Arrangements*

A. The normal point of contact for implementation of the points in this Memorandum will be the NRC/FEMA Steering Committee.

B. The Steering Committee will establish the day-to-day procedures for assuring that the arrangements of this Memorandum are carried out.

### *VI. Memorandum of Understanding*

A. This Memorandum of Understanding shall be effective as of November 1, 1980, and shall continue in effect unless terminated by either party upon 30 days' notice in writing.

B. Amendments or modifications to this Memorandum of Understanding may be made upon written agreement by both parties to the memorandum.

Approved for the U.S. Nuclear Regulatory Commission.

Dated: November 3, 1980.

William J. Dircks,

Executive Director for Operations.

Approved for the U.S. Federal Emergency Management Agency.

Dated: November 4, 1980.

Frank A. Camm,

Associate Director for Plans and Preparedness.

### **Memorandum of Understanding Between the Federal Emergency Management Agency and the Nuclear Regulatory Commission for Incident Response**

#### *I. Introduction*

This Memorandum of Understanding (MOU) is in recognition of the need expressed by the President's Commission on the Accident at Three Mile Island that Federal emergency support in any future accidents at nuclear power plants be better coordinated. It was also agreed in the January 14, 1980, MOU between Nuclear Regulatory Commission (NRC) and Federal Emergency Management Agency (FEMA) on the subject of prompt improvement in radiological emergency planning and preparedness, that a separate MOU would be negotiated covering NRC/FEMA cooperation and responsibilities in response to an actual emergency.

#### *II. Purpose*

This Memorandum of Understanding is to define the relationships between FEMA and NRC in connection with response to a potential or actual radiological emergency. The MOU focuses on the assistance that FEMA

## MEMORANDA OF UNDERSTANDING

and NRC can provide to each other in carrying out responsibilities for the health and safety of the public.

### III. Authorities and Responsibilities

FEMA was established by Reorganization Plan No. 3 of 1978 and placed into effect by Executive Orders 12127 of March 31, 1979 (44 FR 19387) and 12148 of July 20, 1979 (44 FR 43239) in order to create a single point of management for the emergency planning and response activities of the Federal Government.

Executive Order 12148 charges the Director, FEMA, with establishing policy for and coordinating all civil emergency planning and assistance functions for Executive agencies (section 2-101). It also provides that civil emergency functions shall, whenever possible, be based on extensions (under emergency

conditions) of the regular missions of the Executive agencies (section 2-202).

On December 7, 1979, the President, in response to the recommendations of the Kemeny Commission on the accident at Three Mile Island, directed that FEMA assume lead responsibilities for all off-site nuclear emergency planning and response.

Pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, the NRC has the authority and responsibility for licensing and regulating, among others, nuclear power reactors in order to protect the health and safety of the public from radiation hazards. To meet its statutory responsibility for protecting the public health and safety from radiation hazards, the NRC will respond promptly and effectively to radiological emergencies.

### IV. Agency Roles

The NRC and FEMA officials will work in tandem both on- and off-site. NRC will have the lead on-site and in matters relating to assessment of hazards and recommendations for protective actions. FEMA will have the lead in the off-site Federal response role. These roles are complementary and require constant communications and mutual support. Such a cooperative structure will extend to the NRC and FEMA relations with State and local officials. Based on each agency's specific authority, responsibilities and the public's needs in an emergency situation, the roles of each agency in a radiological emergency are complementary and enumerated as follows:

A. NRC—NRC will maintain a readiness to function in a variety of roles. Within each of these roles, a spectrum of actions can be accomplished.

1. *Notification.* NRC will notify FEMA, as quickly as possible, whenever a radiological emergency occurs or whenever there is a high potential for such an occurrence.

2. *Monitor the Incident.* NRC will verify and evaluate data from multiple sources to assure that appropriate operational measures are being taken, and assure that adequate information and recommendations are being provided to off-site agencies so that appropriate protective actions may be taken. NRC will also monitor these protective actions.

3. *Advise Other Government Entities.* Provide technical assessment of on-site radiological conditions and of the physical condition of the facility to the appropriate State and local government officials as well as to FLMA and other Federal agencies.

Advise FEMA of any NRC or licensee recommendations for off-site protective actions. Work with FEMA representatives to establish a cooperative relationship with State and local officials including the Governors of the affected States.

Advise FEMA, State, local and other Federal government officials, of any operational decisions or actions being taken by the licensee or the NRC which may affect the off-site protective actions.

NRC should prepare appropriate recommendations for protective actions, for State and local officials, including the governors and local chief executives. Such recommendations should reflect all substantive dissenting views from other Federal agencies and should be presented jointly with FEMA. Direct contact is expected if imminent peril to the public health and safety exists and time does not permit a coordinated recommendation.

4. *Disseminate Technical Information.* In coordination with licensee, NRC will provide technical information regarding the radiological conditions on-site and around the nuclear facility and regarding the physical condition of the facility to the White House, FEMA, other Federal agencies, Congress, news media and general public. The NRC will also provide specific technical assessments to FEMA for its use in coordinating off-site response activities.

B. FEMA—FEMA will have the following roles in coordinating the Federal response and in support of NRC in its technical mission during a radiological emergency.

1. *Notification.* Receive emergency notification from NRC that a radiological incident has occurred.

2. *Monitor.* Receive the technical advisories of the NRC regarding the radiological conditions at and around the affected site and the physical

conditions of a facility. Keep other Federal organizations with support roles advised of the situation.

3. *Advise.* Keep the Governor and his appointed representative as well as local Government officials informed of the status of Federal assistance being provided and that is available.

4. *Coordination and Support.* Provide and coordinate Federal response to assist NRC in carrying out its technical role. Coordinate response with State and local officials in connection with potential response activities associated with radiological emergencies. Coordinate Federal support to assist State and local officials when a decision is made to take protective action.

5. *Dissemination of Information.*

FEMA will be responsible for the dissemination of information concerning offsite support activities to the White House, other Federal agencies, Congress, news media, and general public.

### V. Emergency Response

A. *Criteria for Notification.* NRC will notify FEMA whenever a radiological emergency occurs or there is a high potential for such occurrence; i.e. whenever the NRC makes a decision to activate the Executive Management Team (EMT). FEMA will notify NRC if it becomes aware of an occurrence through the activity of its Operations Center.

B. *Exchange of Personnel During an Emergency.* As early as possible upon activation of the NRC Operations Center, NRC will consult with FEMA to determine whether each agency should have a representative stationed at the other's Operations Center.

#### C. Communications.

1. NRC and FEMA recognize the need for mutual communications support and interface capability, particularly in the areas of emergency notification and response coordination. The two agencies agree to periodically evaluate their respective communications capabilities to maintain compatibility for effective and efficient communications at national, regional and local deployment levels. Communications liaison between the agencies will continue to identify interface/mutual support communications opportunities, to develop appropriate procedures for implementation of agreed-on courses of action, and will develop interagency emergency communications operational procedures.

2. FEMA authorizes NRC to enter the Civil Defense National Radio System (CDNARS) for relaying emergency information. NRC will notify the FEMA Operations Center (DR&R) when it needs to enter the CDNARS network. The FEMA Regional Center responsible



## MEMORANDA OF UNDERSTANDING

for the geographical area in which NRC desires to operate will exercise net control functions. The primary transmission method will be by voice. NRC will reimburse FEMA for additional personnel costs incurred in the provision of NRC-requested service. NRC will acquire, at its own expense, equipment compatible with CDNARS.

3. FEMA agrees in the event of a nuclear incident, to permit NRC and all licensed fixed nuclear facilities access to the National Warning System (NAWAS), and any other warning networks which FEMA currently has available or may develop in the future. Specific details and justification for the needed access will be provided to FEMA by NRC. The use of NAWAS will be subject to FEMA criteria. FEMA will not be liable for additional costs involved.

D. *Participation in Exercises.* FEMA and NRC will participate, in periodic exercises. Such exercises may involve FEMA/NRC Headquarters and/or Regional offices, licensee and State and local government participation. Each agency will fund its participation in these exercises. If any significant costs are anticipated, discussions concerning each agency's participation will be held at least 30 days before such an exercise. FEMA and NRC will also participate in periodic communication checks.

E. *Off-Site Collocation.* The NRC Director of site operations will be located at the near-site emergency operations facility designated by a licensee. FEMA will assign at least one representative to this location to assure that FEMA and NRC activities are coordinated and that there is an effective information exchange.

### VI. Public Affairs

NRC and FEMA agree that, where practicable, public announcements by the two agencies on emergencies will be coordinated. NRC announcements and public statements will deal with radiological conditions on-site and around the nuclear facility and the physical condition of the facility. Public statements by FEMA will deal with information concerning off-site response activities. Both agencies agree to work closely with the Governor's office in issuing public statements.

### VII. Terms of Agreement

A. This Memorandum of Understanding shall take effect when signed by both parties and shall endure until terminated by one of the parties. Participation in this agreement may be terminated by either party following 30 days advance written notice to the other party.

B. Modifications to this Memorandum of Understanding may be made by written agreement of both parties.

C. It is recognized that the National Contingency Plan mandated in the NRC Appropriation Authorization (Pub. L. 96-295, June 30, 1980) will bear directly on the provisions of this Memorandum of Understanding and result in this agreement being superseded or modified.

D. In the event that an emergency or a major disaster is declared by the President pursuant to the provisions of the Disaster Relief Act of 1974, it is understood that FEMA will not issue any directives to the NRC, or make requests for assistance from the NRC under such Act which would impede or interfere with NRC's ability to meet its statutory responsibilities under the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974.

E. The effective date of this agreement is October 22, 1980.

For the Nuclear Regulatory Commission.  
John F. Ahearns,  
*Chairman, Nuclear Regulatory Commission.*

For the Federal Emergency Management Agency.  
John W. Macy, Jr.,  
*Director, Federal Emergency Management Agency.*





## PETITIONS FOR RULE MAKING

Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch by October 1, 1979.

For further information contact: J. M. Felton, Director, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, telephone 301-492-7211.

44 FR 47998

Published 8/16/79

Comment period expires 10/15/79

[PRM-73-5]

### Edlow International Co.; Filing of Petition for Rule Making

Notice is hereby given that Mr. Samuel Edlow, President, Edlow International Company, by letter dated June 29, 1979, has filed with the Nuclear Regulatory Commission, a petition for rule making to amend the Commission's regulations "Domestic Licensing of Special Nuclear Material," 10 CFR Part 70, and "Physical Protection of Plants and Materials," 10 CFR Part 73.

The petitioner requests the Commission to amend §§ 70.20a(a), 70.20a(d)(1), and 70.20a(d)(2) to change the references "73.30 through 73.36" to read "73.30 through 73.37".

The petitioner also requests the Commission to amend § 73.37(a) and Appendix D of Part 73 by changing the words "Each licensee who transports or delivers to a carrier for transport irradiated reactor fuel" to read "Each licensee who transports irradiated reactor fuel".

As a basis for the petition, the petitioner states that:

The effect of these proposed amendments would be to make the new Part 73 physical security requirement during transport of spent fuel shipments consistent with the philosophical approach applied to shipment of SSNM in other forms.

When section 70.20a became effective June 7, 1979, it served to place the responsibility on the carrier to provide the physical security required during transport. This new approach excluded spent fuel because, at that time, the Commission had not yet concluded that spent fuel required physical security during the transportation cycle.

When the Commission determined to require physical security for shipments of spent fuel, consistency would have been best served had it acted to extend the general license to include spent fuel as a new material under parts 73.30 through 73.36. The action of the Commission effectively served to remove the prior exemption of spent fuel from the materials named in parts 73.30 through 73.36.

Instead, the amendments to Part 73 which become effective July 18, place the onus for

providing physical security for spent fuel during transport on the shipper rather than on the carrier. In the instance of all other SSNM, the onus is on the carrier rather than the shipper.

It is clear that this inconsistency should be corrected, and it is in this interest that we petition for the amendments as listed.

A copy of the petition for rule making is available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, DC. A copy of the petition may be obtained by writing the Division of Rules and Records at the below address.

All persons who desire to submit written comments or suggestions concerning the petition for rule making should send their comments to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch by October 15, 1979.

For further information contact: J. M. Felton, Director, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone 301-492-7211.

44 FR 50419

Published 8/28/79

Comment period expires 10/29/79

[Docket No. PRM-140-1]

### Public Citizen Litigation Group Critical Mass Energy Project; Filing of Petition for Rule Making

Notice is hereby given that representatives of the Public Citizen Litigation Group and the Critical Mass Energy Project, by petition dated July 24, 1979, have requested that the Nuclear Regulatory Commission (NRC) find, pursuant to the procedures and criteria in the NRC's regulation's (Subpart E of 10 CFR Part 140), that the nuclear accident commencing on March 28, 1979 at the Three Mile Island, Unit 2 nuclear power plant constitutes an "extraordinary nuclear occurrence" (ENO). The petition also requested that the NRC amend Subpart E of 10 CFR Part 140 to make less stringent the criteria used by the Commission for determination of whether or not an ENO has occurred.

The Commission intends to treat the first part of the petition as a response to its July 23, 1979, Federal Register notice (44 FR 43128) announcing its decision to initiate "the making of a determination as to whether or not the recent accident at Three Mile Island constitutes an extraordinary nuclear occurrence" and inviting interested persons to submit to the Commission on or before August 22, 1979 "any information in their

possession relevant to this determination."

The Commission intends to treat the second part of the petition as being a petition for rule making filed in accordance with 10 CFR 2.802 of the Commission's regulations. This part of the petition states, in relevant part, as follows:

Whether or not the Commission finds that the criteria currently set out in its regulations indicate that the accident at Three Mile Island was an extraordinary nuclear occurrence, petitioners request that the Commission alter or amend those criteria to bring them more into line with the clear intent of Congress on this matter.

Under these criteria, there is no question that the accident at Three Mile Island is of the size and type Congress was led to believe would be considered an extraordinary nuclear occurrence. However, from the inception of the concept of an extraordinary nuclear occurrence, the Commission also contemplated criteria establishing an accident of much smaller proportions than Three Mile Island as an extraordinary nuclear occurrence.

Inasmuch as the Commission has the power and discretion to make the definition of an extraordinary nuclear occurrence responsive to the circumstances and needs of the public, and inasmuch as accidents of far smaller size could be designated extraordinary nuclear occurrences in conformity with the legislative intent of the Price-Anderson Act as amended, it is appropriate and necessary that the criteria for the determination of an extraordinary nuclear occurrence be revised, altered or amended so as to respond effectively to those circumstances and demonstrated needs. In order that the assurances to the public and to Congress not prove to be empty promises, petitioners urge the Commission to alter or amend its criteria for an extraordinary occurrence through appropriate rulemaking procedures, whether or not the current criteria are satisfied by the accident at Three Mile Island.

A copy of the petition for rule making is available for public inspection in the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. A copy of the petition may be obtained by writing to the Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

All persons who desire to submit written comments or suggestions concerning the petition for rule making should send their comments to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 Attention: Docketing and Service Branch by October 29, 1979.

**FOR FURTHER INFORMATION CONTACT:** Joseph M. Felton, Director, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Telephone: 301-492-7211.

## PETITIONS FOR RULE MAKING

44 FR 57540  
Published 10/5/79

[Docket No. PRM-40-22]

### Defense Security Assistance Agency

Notice is hereby given that Lieutenant General Ernest Graves, Director, Defense Security Assistance Agency, by petition dated August 3, 1979, has requested that the Nuclear Regulatory Commission (NRC) add a new section 40.23 to the Commission's 10 CFR Part 40, Domestic Licensing of Source Material (currently effective as section 110.23 in 10 CFR Part 110, "Export and Import of Nuclear Facilities and Materials") to provide:

(g) A general license is hereby issued authorizing the Department of Defense to export to any authorized country pursuant to the Arms Export Control Act or the Foreign Assistance Act of 1961 depleted uranium in munitions penetrators, provided that each such export is approved by the department of State pursuant to either Act.

The petitioner states that the Department of defense is now seeking statutory authority to sell or grant depleted uranium munitions on a government-to-government basis by amending the Arms Export Control Act and Foreign Assistance Act. These acts currently do not include depleted uranium penetrators within the definition of a "defense article" which the Department of Defense is authorized to sell to foreign governments. The Department of Defense believes that statutory amendments to the Arms Export and Control Act and the Foreign Assistance Act, which would in effect include depleted uranium penetrators within the definition of a "defense article", are about to be adopted by the Congress in H.R. 3173, 96th Congress, the International Security Assistance Act of 1979. In anticipation of this legislation, which will in effect authorize the Department of Defense to sell depleted uranium munitions on a government-to-government basis, petition is being made at this time for a general license for the Department of Defense to export depleted uranium contained in defense articles granted or sold on a government-to-government basis under the authority of the Foreign Assistance Act or the Arms Export Control Act.

The petitioner also states:

- • • The Department of the Army, Navy, and Air Force have under development or have developed depleted uranium munitions which are designed to take advantage of the high density of depleted uranium in order to obtain desired weapons effects against heavily armored targets or for close-in airborne missiles. These munitions will also

be made available to foreign governments under grant aid or military sales programs authorized by the Arms Export and Control Act and the Foreign Assistance Act.

Granting a general license to export depleted uranium penetrators would not be inimical to the common defense and security or constitute an unreasonable risk to the public health and safety.

Utilization of a general license for the export of depleted uranium munitions will require that the department of Defense secure approval for any proposed sale of such munitions from the State Department and condition any sale on agreement by the recipient foreign government not to transfer depleted uranium munitions to another country without United States Government approval, not to divert

depleted uranium munitions for uses other than their intended purpose, and to comply with United States Government requirements for inventory verification.

A copy of the petition for rule making is available for public inspection in the Commission's Public Document Room, 1717 H Street, NW., Washington, DC. A copy of the petition may be obtained by writing to the Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

All persons who desire to submit written comments or suggestions concerning the petition for rule making should send their comments to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch by December 4, 1979.

For further information contact: Joseph M. Felton, Director, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Telephone: 301-492-7211.

## PETITIONS FOR RULE MAKING

45 FR 7653  
Published 2/4/80

[Dockets Nos. PRM-80-25 and PRM-50-25a]

**State of Illinois and the Porter County Chapter of the Izaak Walton League of America, Inc., et al.**

Notice is hereby given that the State of Illinois and the Porter County Chapter of the Izaak Walton League of America, Inc.; Concerned Citizens Against Baily Nuclear Site; Businessmen for the Public Interest, Inc.; James E. Newman and Mildred Warner, by petitions dated December 20, 1979, have requested the Nuclear Regulatory Commission (NRC) to amend or rescind subsection 50.55(b) of the Commission's regulations in 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities."

Subsection 50.55(b) provides the procedure and basis for extending the completion date for the construction or modification of a nuclear generating plant, as outlined below. The petitioners request that § 50.55(b) be amended or rescinded to permit consideration of a broad range of issues in a proceeding to determine whether the completion date for a construction period should be extended.

Subsection 50.55(b) provides that if proposed construction or modification of a facility is not completed by the latest completion date allowed by a permit, the permit will expire. The subsection provides, however, that the NRC will extend the completion date for a reasonable time upon "good cause" for the delay being shown. As a basis for extending the date, § 50.55(b) provides that the Commission will consider "... developmental problems attributable to the experimental nature of the facility or fire, flood, explosion, strike, sabotage, domestic violence, enemy action, an act of the elements, and other acts beyond the control of the permit holder. . . ."

The petitioners request the Commission to

... A. amend or rescind 10 CFR § 50.55(b) and B. promulgate a regulation which requires that a "good cause" proceeding concerning a requested amendment of a construction permit to extend the latest construction completion date, . . . consider whether the permittee has shown good cause for the continued construction of the plan[t] in light of all the circumstances at the time of considering the application. The Commission should determine that "good cause" should not be limited to the reasons why construction was not completed by the latest completion date in the construction permit.

The petitioners note that section 185 of the Atomic Energy Act permits

construction permit extensions only upon good cause shown. They assert that by limiting consideration to reasons

why construction was not completed, the statutory purposes of requiring consideration of "good cause" for the construction would be frustrated and would be a violation of section 185 of the Act.

The petitioners assert also that the application of § 50.55(b), if it is interpreted in a way which limits consideration to the reasons why construction was not completed by the latest completion date in the permit, "... would frustrate the statutory purpose of requiring that 'good cause' be shown for an extension." The petitioners request that a rule be established which reflects the statutory purpose of section 185 of the Atomic Energy Act, and that a regulation which is in violation of this statutory purpose should be rescinded or amended.

Simultaneously with the filing of the petition, the petitioners filed (a) a Petition for Leave to Intervene in the NRC proceeding which is considering a request of the Northern Indiana Public Service Company (NIPSCO) for an extension of the completion date for Baily Generating Station, Nuclear 1; and (b) a Petition for Waiver of or Exception to 10 CFR 50.55(b). The petitioners request that if the relief requested by either of these petitions is granted, then the Petition for Rulemaking may be considered moot. If this relief is not granted, the petitioners request suspension of the Baily proceeding pending disposition of their Petition for Rulemaking.

The petitions from the State of Illinois and the Porter County Chapter of the Izaak Walton League of America, et al., have been assigned Docket Numbers PRM-50-25 and PRM-50-25a, respectively.

Copies of the petitions for rulemaking, the petitions to intervene, and the petitions for waiver are available for public inspection in the Commission's Public Document Room, 1717 H Street, NW., Washington, DC. Copies of the petitions may be obtained by writing to the Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

All persons who desire to submit written comments or suggestions concerning the petitions for rulemaking should send their comments to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch by April 4, 1980.

For further information contact: Joseph M. Felton, Director, Division of

## PETITIONS FOR RULE MAKING

Rules and Records, Office of  
Administration, U.S. Nuclear Regulatory  
Commission, Washington, DC 20555,  
telephone 301-492-7211.

45 FR 10360

Published 2/15/80

Comment period expires 4/15/80

➤ Denial Published 12/29/80

### 10 CFR Part 50

[Docket No. PRM-50-26]

#### Domestic Licensing of Production and Utilization Facilities; William K. Watson; Filing of Petition for Rulemaking

**AGENCY:** U.S. Nuclear Regulatory  
Commission.

**ACTION:** Publication of Petition for  
Rulemaking from William K. Watson.

**SUMMARY:** The Nuclear Regulatory  
Commission is publishing for public  
comment, as a petition for rulemaking, a  
motion filed before the Commission on  
January 6, 1980, by William K. Watson.  
This petition, which has been assigned  
Docket No. PRM-50-26, requests that  
the Commission amend 10 CFR Part 50,  
"Domestic Licensing of Production and  
Utilization Facilities," to provide that an  
applicant for a license for a facility  
which will store certain quantities of  
nuclear products be required to design  
the facility to protect against release to  
the atmosphere of these products if the  
facility is attacked by nuclear weapons  
detonated at ground level and having an  
equivalent yield of up to 5 megatons.

**DATE:** Comment period expires April 15,  
1980.

**ADDRESSES:** A copy of the petition for  
rulemaking is available for public  
inspection in the Commission's Public  
Document Room, 1717 H Street, N.W.,  
Washington, DC. A copy of the petition  
may be obtained by writing to the  
Division of Rules and Records, Office of  
Administration, U.S. Nuclear Regulatory  
Commission, Washington, DC, 20555.

All persons who desire to submit  
written comments or suggestions  
concerning the petition for rulemaking  
should send their comments to the  
Secretary of the Commission, U.S.  
Nuclear Regulatory Commission,  
Washington, DC 20555, Attention:  
Docketing and Service Branch.

**FOR FURTHER INFORMATION CONTACT:**  
Joseph M. Felton, Director, Division of  
Rules and Records, Office of  
Administration, U.S. Nuclear Regulatory  
Commission, Washington, DC, 20555,  
Telephone: 301-492-7211.

**SUPPLEMENTARY INFORMATION:** The  
pertinent paragraph of the Commission's  
regulations, 10 CFR § 50.13, now reads  
as follows:

"An applicant for a license to  
construct and operate a production or  
utilization facility, or for an amendment  
to such license, is not required to  
provide for design features or other  
measures for the specific purpose of  
protection against the effects of (a)  
attacks and destructive acts, including  
sabotage, directed against the facility by  
an enemy of the United States, whether  
a foreign government or other person, or  
(b) use or deployment of weapons  
incident to U.S. defense activities."

The petitioner requests that this  
paragraph be replaced by the following  
wording:

"An applicant for a license to  
construct a production or utilization  
facility, or for an amendment to such  
license, wherein it is contemplated there  
will be stored anywhere within the  
facility nuclear products with a  
radioactive half life of one year or more  
in quantities in excess of 100,000 Curies,  
shall be required to design the facility in  
such a manner that the nuclear products  
cannot be released to the atmosphere by  
the use of a nuclear weapon with an  
equivalent yield of less than five (5)  
megatons which is detonated at ground  
level at the geographical location of any  
structures at the facility which contain  
the aforesaid quantities of radioactive  
material."

The petitioner alleges that nuclear  
armed cruise missiles are now able with  
reasonable probability to directly  
impact a building, pond, or storage tank  
and disseminate the contents over a  
wide region. In support of his  
contentions, the petitioner attaches an  
article from an unidentified publication,  
entitled "Why Nuclear Power Should go  
Underground". This article refers to  
Government-sponsored reports which,  
according to the article, indicate that a  
direct hit by nuclear weapons in the 20-  
to 100-kiloton range could smash the  
reactor containment vessel and release  
its contents.

45 FR 25557

Published 4/15/80

Comment period expires 6/16/80

[Docket No. PRM-51-8]

#### Catherine Quigg; Filing of Petition for Rulemaking

**AGENCY:** U.S. Nuclear Regulatory  
Commission.

**ACTION:** Publication of petition for  
rulemaking by Catherine Quigg.

**SUMMARY:** The Nuclear Regulatory  
Commission (NRC) is publishing for  
public comment a petition for

rulemaking filed by Catherine Quigg,  
Research Director, Pollution and  
Environmental Problems, Inc. The  
petition, which has been assigned  
Docket No. PRM-51-8, requests the NRC  
to amend 10 CFR Part 51, "Licensing and  
Regulatory Policy and Procedures for  
Environmental Protection," to require  
the preparation of a generic  
environmental impact statement for high  
burnup nuclear fuel as used in  
commercial nuclear reactors, stored in  
spent fuel pools or cooling racks, or  
potentially as processed in reprocessing  
plants or disposed of in permanent sites.  
**DATE:** Comment period expires June 18,  
1980.

**ADDRESSES:** A copy of the petition for  
rulemaking is available for public  
inspection in the Commission's Public  
Document Room, 1717 H Street, N.W.,  
Washington, DC. A copy of the petition  
may be obtained by writing to the  
Division of Rules and Records, Office of  
Administration, U.S. Nuclear Regulatory  
Commission, Washington, DC 20555.

All persons who desire to submit  
written comments or suggestions  
concerning the petition for rulemaking  
should send their comments to the  
Secretary of the Commission, U.S.  
Nuclear Regulatory Commission,  
Washington, DC 20555, Attention:  
Docket and Service Branch.

**FOR FURTHER INFORMATION CONTACT:**  
Joseph M. Felton, Director, Division of  
Rules and Records, Office of  
Administration, U.S. Nuclear Regulatory  
Commission, Washington, DC, 20555,  
Telephone: 301-492-7211.

**SUPPLEMENTARY INFORMATION:** The  
petitioner states that with the decision  
not to reprocess, the Federal government  
and the utilities want to use more  
uranium in existing nuclear fuel in  
light water reactors across the country.  
To that end, the U.S. Department of  
Energy (DOE) has initiated cost-shared  
high burnup projects with Duke Power  
Company and Arkansas Power & Light.  
The DOE is also supporting two pellet  
clad interaction (p.c.i.) projects with  
Consumers Power Company and  
Commonwealth Edison Company.

The petition also states that on March  
7, 1979 the NRC issued a permit to the  
Commonwealth Edison Company  
allowing the irradiation of four Zion fuel  
assemblies to extend burnups in Zion 2,  
up to about 55,000 MWD/MTU. Zion's  
Technical Specifications previously  
provided for a burnup limit of 38,000  
MWD/MTU. The petitioner indicates  
that there has been no experience with  
fuel size fuel assemblies irradiated to  
these burnups, but nonetheless the NRC



## PETITIONS FOR RULE MAKING

A copy of "Abstracts of Comments and Staff Responses: Proposal that Nuclear Regulatory Commission Amend Table S-3 of 10 CFR 51.20(e) to Include the Economic Impacts of Various Waste Management Activities of the Uranium Fuel Cycle—Docket No. PRM 51-5," will be placed in the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C., for public inspection and copying for a fee.

The effect of the Commission's action on this petition is that it is denied.

Dated at Washington, D.C., this 3rd day of November, 1980.

For the U.S. Nuclear Regulatory Commission.

**Samuel J. Chilk**

*Secretary of the Commission.*

### **Separate Views of Chairman Ahearn and Commissioner Hendrie**

Chairman Ahearn and Commissioner Hendrie, who voted to deny the petition, based their decision on the following analyses:

The decision whether to resolve issues by rulemaking or in individual licensing proceedings, and determination of the scope of a given rulemaking proceeding, is a matter of Commission discretion. By itself, Table S-3 does not and is not intended to implement all the requirements of NEPA. Its purpose is to fix generically, by rulemaking proceedings, certain environmental effects attributable to the variety of uranium fuel cycle activities in support of a model 1,000 MWe nuclear reactor, which are beyond the control of the license applicant, so that it is not necessary for each applicant, other interested persons, and the NRC staff to redefine and litigate these values in every individual reactor licensing proceeding. Cost data are somewhat regional or site-specific and vary with time; and the applicant has some control over costs by choice of alternatives, e.g., method for waste treatment or method of decommissioning. Moreover, generic dollar values would be subject to challenge because they may not remain valid for very long, and if included in Table S-3, they would have to be frequently updated by rulemaking proceedings to amend Table S-3. The necessity to frequently update economic values in the S-3 fuel cycle rule would defeat its purpose—to avoid constant relitigation. For these reasons, the economic commitments related to the various nuclear waste activities involved in the uranium fuel cycle should continue to be addressed on a case-by-case basis and discussed in a manner similar to the way all other economic commitments are addressed in

the applicable sections of environmental reports and environmental impact statements. Since the applicant and the staff both have access to current cost data and estimated costs, the evaluation of the economic costs of power generation and related cost-benefit analyses in environmental reports and impact statements should be based on current regional or site-specific cost projections, rather than generic values.

### **Grounds for Denial**

Petition for rulemaking PRM 51-5 should be denied on the grounds that economic costs related to nuclear waste management activities are too variable to be treated generically and are more appropriately addressed on a case-by-case basis in the same manner as other economic cost data relevant to the evaluation of the cost of generating power. Not only does the choice among alternative nuclear waste management activities affect the amount of economic resources committed, but the alternative selected is specific to each reactor and is within the license applicant's control. Since generic cost data are unlikely to remain valid for more than a short period of time, and since appropriate facility-specific data are readily available for use by the applicant, intervenors and the NRC staff, there is little merit in supplying generically derived cost data in Table S-3 for use in the benefit-cost analysis of individual nuclear reactors.

### **Separate View of Commissioner Gilinsky**

I would grant the motions to amend Table S-3 to include the costs in dollars of the various waste management activities connected with power reactor operation. The Table cannot be used for its intended purpose—the balancing of costs and benefits of reactor operation—without such figures. The staff position that the costs related to waste are so variable that they cannot be treated generically is to my mind indefensible.

I should add that I continue to believe, as I wrote in my separate views on the final adoption of the S-3 rule (44 FR 45374), that it is virtually inconceivable that the Table would affect the outcome of any licensing proceeding before our Boards, precisely because of the generic nature of the information it contains. Because the Table does not distinguish among reactors, a decision in one case that the fuel cycle costs outweigh the reactor's benefits is in effect a decision that no reactor should be licensed. As a practical matter, such a finding can only come from the Commission itself. What is wanted for the Boards is therefore not

a table of values but a generic finding by the Commission.

Nevertheless, since the Commission has chosen to have the Boards work with the Table, we should try to make it usable.

While it is true that cost data will vary slightly from region to region and reactor to reactor, bounding assumptions can be made and values can be attached to particular alternatives. Cost figures would not need to be updated more than every five years, and this would be a much easier matter than litigating them in individual proceedings.

Commissioner Bradford agrees with the general thrust of these comments.

## PETITION FOR RULEMAKING

45 FR 85465

Published 12/29/80

### Domestic Licensing of Production and Utilization Facilities

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Denial of a petition for rulemaking.

**SUMMARY:** Notice is hereby given that a petition for rulemaking filed by Mr. William K. Watson by letter dated January 6, 1980, with the Nuclear Regulatory Commission is denied. This petition, which was assigned Docket Number PRM-50-28, requested that the Commission amend 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities." The proposed amendment would have provided that an applicant for a license for a facility that stored certain quantities of nuclear products be required to design the facility to protect against release to the atmosphere of these products in the event the facility were attacked by use of nuclear weapons detonated at ground level with a yield of up to 5 megatons.

**FOR FURTHER INFORMATION CONTACT:** James A. Prell, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (301-443-5904).

**SUPPLEMENTARY INFORMATION:** The Nuclear Regulatory Commission (NRC) has denied a petition for rulemaking submitted by letter dated January 6, 1980, from William K. Watson, 5409 Denver Avenue South, Seattle, Washington 98108. A notice of filing of petition, Docket No. PRM-50-28, was published in the *Federal Register* on February 15, 1980 [45 FR 10360]. Interested persons were invited to submit written comments or suggestions on the petition.

Mr. Watson petitioned the Commission to revise the language of 10 CFR Part 50.13 to read as follows:

"An applicant for a license to construct a production or utilization facility, or for an amendment to such license, wherein it is contemplated there will be stored anywhere within the facility nuclear products with a

radioactive half-life of one year or more in quantities in excess of 100,000 Curies, shall be required to design the facility in such a manner that the nuclear products cannot be released to the atmosphere by the use of a nuclear weapon with an equivalent yield of less than five (5) megatons which is detonated at ground level at the geographical location of any structures at the facility which contain the aforesaid quantities of radioactive material."

The petitioner alleges that nuclear-armed cruise missiles are now able, with reasonable probability, to directly impact a building, pond, or storage tank and disseminate their contents over a wide region. In support of his contentions, the petitioner references two articles written by C. V. Chester and R. O. Chester of Oak Ridge National Laboratory. Both articles appeared in a magazine entitled "Nuclear Application and Technology." The first, "Civil Defense Implications of A Pressurized Water Reactor In A Thermonuclear Target Area," was published in the December 9, 1970, issue while the second, "Civil Defense Implications Of An LMFBTR In A Thermonuclear Target Area," was published in the March 1974 issue. These articles indicate that a direct hit by nuclear weapons in the 20- to 100-kiloton range could smash the reactor containment vessel and disperse its contents over a large area.

The basic question inherent in the petition is: "Should the Nuclear Regulatory Commission, in licensing the construction of nuclear facilities for peaceful civilian use, take into account and require effective protection against the possibility of attack by enemies of the United States?" This question has been previously addressed in a decision by the Atomic Energy Commission in *Florida Power and Light Company* (Turkey Point Nuclear Generating Units No. 3 and No. 4) 4 AEC 9 (1967). That decision was later upheld by the United States Court of Appeals for the District of Columbia Circuit in *Siegel vs. Atomic Energy Commission*, 400 F.2d 778 (1968).

In its opinion the Atomic Energy Commission discussed the meaning of the statutory terms "common defense and security" and "health and safety of the public" in the following manner:

We think it plain from the structure of the Atomic Energy Act and the construction placed thereon by the United States Supreme Court (*Power Reactor Development Co. v. International Union*, 367 U.S. 396, 1961), that responsibility for interpreting and implementing the Act's general standards has been vested by the Congress in the Atomic Energy Commission which is charged with determining what measures are required to give application to those standards. In our regulatory process, as the staff points out, we have implemented the statutory requirements regarding the "common defense and security" and the "health and safety of the public" in Commission regulations applicable to nuclear reactors, particularly Parts 20, 50, 70 and 100, and have furnished additional guidance in our decisions.

For a fuller understanding of the premises underlying that implementation, one must recall the circumstances at the time of enactment of the Atomic Energy Act of 1954 and the issuance thereafter of Commission regulations bearing on reactor licensing. Reactor technology, although then in the process of declassification, was essentially still classified. Further, concern existed that there be sufficient special nuclear material for our military needs and that the material used for fueling reactors, all of which was Government-owned, be subject to appropriate safeguards against loss or diversion. While the passage of time has lent more immediacy to some of these concerns as contrasted to others, we have, in the above context, considered the common defense and security standard to refer principally to: the safeguarding of special nuclear material; the absence of foreign control over the applicant; the protection of Restricted Data; and the availability of special nuclear material for defense needs.

We have considered the public health and safety standard to refer to the overall qualifications of the applicant and the design of the facility to protect plant employees and the public against accidents and their consequences. At the operating license stage we would also consider such matters as the execution of the design of the facility and proposed operating procedures.

This implementation of the subject standards has been based upon our understanding of the intent of Congress as expressed in the various provisions of the Atomic Energy Act which pertain to the licensing of reactors and of the legislative concerns which gave rise to those provisions. It bears emphasis that—as is the case with the Act and its legislative history—neither our regulations nor our decisions indicate any requirement that an applicant provide for special design features or other measures for the specific purpose of protection against the effects of enemy attacks and destructive acts.

We believe that our practice of excluding the foregoing from licensing consideration is founded on compelling factors. It would appear manifest, as an initial proposition, that the protection of the United States against hostile enemy acts is a responsibility of the nation's defense establishment and of the various agencies of our Government having internal security functions. The power reactors which the Commission licenses are, or course, equipped with numerous features intended to assure the safety of plant employees and the public, as indicated by our earlier summary description of the proposed Turkey Point facility. These safeguards, while designed to protect against accidents and their consequences, do not have as their specific purpose protection against effects of enemy attacks and destructive acts—although the massive containment and the procedures and systems for rapid shutdown

of the facility could also serve a useful purpose in the latter regard. One factor underlying our practice in this connection has been a recognition that reactor design features to protect against the full range of the modern arsenal of weapons are simply not practicable and that the defense and internal security capabilities of this country constitute, of necessity, the basic "safeguards" as respects possible hostile acts by an enemy of the United States.

## PETITION FOR RULEMAKING

The circumstances which compel our recognition are not, of course, unique as regards a nuclear facility; they apply also to other structures which play vital roles within our complex industrial economy. The risk of enemy attack or sabotage against such structures, like the risk of all other hostile acts which might be directed against this country, is a risk that is shared by the nation as a whole. This principle, we believe, is rooted in our political history and we find no Congressional indication that nuclear facilities are to be treated differently in the subject regard.

Certain other considerations are equally militating in our view. Assessment of whether, at some time during the life of a facility, another nation actually would use force against that particular facility, the nature of such force and whether that enemy nation would be capable of employing the postulated force against our defense and internal security capabilities are matters which are speculative in the extreme. Moreover, examination into the above matters, apart from their extremely speculative nature, would involve information singularly sensitive from the standpoint of both our national defense and our diplomatic relations. These matters are clearly not amenable to board consideration and determination in the licensing process and we would not propose to make them cognizable issues in the absence of a clear Congressional direction to that end. (4 AEC at pp. 12-14).

Shortly after denying Mr. Siegel's contention, the Commission published in effective form 10 CFR 50.13, "Attacks and destructive acts by enemies of the United States; and defense activities" (32 FR 13445). In the statement of consideration, the Commission reiterated what the common defense and security standard and the public health and safety standard meant. The meanings were the same as presented in the Commission's response to the Siegel contention.

Mr. Siegel appealed the AEC decision to the United States Court of Appeals for the District of Columbia Circuit. It rendered a decision in August 1968 which upheld the Atomic Energy Commission decision. In upholding the Commission's decision, the Court of Appeals stated:

We are unable to find any specific indication, within or without the corners of the statute, that the Commission was commanded to intrude the possibility of enemy action into the concepts of "the common defense and security" and "the public health and safety." The Commission has, we think persuasively, demonstrated that the legislative concerns reflected in these phrases are of another order. In the case of the former, the internal evidence of the Act is that Congress was thinking of such things as not allowing the new industrial needs for nuclear materials to preempt the requirements of the military; of keeping such materials in private hands secure against loss or diversion; and of denying such materials and classified information to persons whose loyalties were not to the United States. In the

case of the latter standard of "the public health and safety," the Congressional preoccupation was with industrial accidents and the dangers they presented to employees and the neighboring public.

In short, Congress certainly can be taken to have expected that an applicant for a license should bear the burden of proving the security of his proposed facility as against his own treachery, negligence, or incapacity. It did not expect him to demonstrate how his plant would be invulnerable to whatever destructive forces a foreign enemy might be able to direct against it in 1964. We hold that the Commission was well within the limits of the powers delegated to it by Congress when it decided to limit petitioner's cross-examination in the licensing proceeding, and to embody the policy of limitation in its regulations (400 F2d at 784) (footnote omitted).

At the time that the Atomic Energy Act was being written and considered by Congress, potential adversaries of the United States had in their possession nuclear weapons capable of destroying nuclear power plants and dispersing their contents over wide areas. Although these potential adversaries did not possess the technology needed to remotely deliver these weapons to nuclear power plants, (i.e., rockets and missiles), they did possess long range bombers capable of accurately dropping their weapons on predesignated sites. The 1954 Congress had to be aware of this situation as well as this country's research efforts in rocket and missile development. They also had to know that Russia and other countries were developing rockets which could be used for transporting nuclear warheads over long distances. In addition, the 1954 Congress had to be aware of the missile's potential for widespread destruction after having witnessed its effective use by Germany against England during World War II.

Thus, the 1954 Congress was able to relate the potential dangers posed by nuclear weapons and missiles to nuclear power plants. However, nowhere did they indicate, either legislatively or otherwise, that the AEC should be responsible for requiring that licensed facilities be designed to protect the public's health and safety from possible destructive acts by enemies of the United States. The basic argument presented by the petitioner is that the level of sophistication for nuclear missiles has improved so substantially since 1954, that licensed nuclear facilities now should be designed to protect against a release to the atmosphere of their radioactive inventory in the event the facility is targeted by such a weapon.

Granting this petition would establish a precedent affecting not only the nuclear industry, but each industry that possessed material that might be detrimental to the public health and safety. Regulations could be developed requiring that each industry that possessed hazardous material be responsible for defending themselves from attack by enemies of the United States, who may use nuclear weapons. It appears as valid today as in 1954, that protecting the public health and safety from possible destructive acts by enemies of the United States of facilities containing potentially hazardous materials, is and should be the responsibility of the Department of Defense.

Five comments were received from the public in response to the petition published in the *Federal Register*. One of the commenters was C. V. Chester, from Oak Ridge National Laboratory, co-author of the two articles referenced in the petition for rulemaking. All commenters, including Mr. Chester, recommended that the NRC deny the petition. The reasons given by the commenters were that the petition was unreasonable, would be very expensive to implement, and would be illegal if implemented.

It is the belief of the NRC that the technological changes in weaponry referred to in the petition do not alter the logical and legal basis for in the precedents established in this area by the Atomic Energy Commission in its opinion in *Florida Power and Light* (supra), the Court of Appeals decision, and in the rulemaking that resulted in 10 CFR 50.13.

In view of the foregoing, the Executive Director for Operations, acting under authority delegated by the Commission (10 CFR 1.40(o)) has in accord with established precedent denied the petition for rulemaking filed by William K. Watson (PRM 50-26). Copies of the petition for rule making, the comments thereon, and the Commission's letter of denial are available for public inspection in the Commission's Public Document Room at 1717 H Street NW., Washington, D.C.

Dated at Bethesda, Md., this 18th day of November 1980.

For the Nuclear Regulatory Commission,  
**William J. Dircks,**  
*Executive Director for Operations.*



## REGULATORY GUIDES

| Number | Title                                                                                                                                                           | Date  | Revision |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|
| 1.68.2 | Initial Startup Test Program to Demonstrate Remote Shutdown Capability for Water-Cooled Nuclear Power Plants                                                    | 7/78  | 1        |
| 1.69   | Concrete Radiation Shields for Nuclear Power Plants                                                                                                             | 12/73 |          |
| 1.70   | Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants                                                                                 | 11/78 | 3        |
| 1.71   | Welder Qualification for Areas of Limited Accessibility                                                                                                         | 12/73 |          |
| 1.72   | Spray Pond Piping Made From Fiberglass-Reinforced Thermosetting Resin                                                                                           | 11/78 | 2        |
| 1.73   | Qualification Tests of Electric Valve Operators Installed Inside the Containment of Nuclear Power Plants                                                        | 1/74  |          |
| 1.74   | Quality Assurance Terms and Definitions                                                                                                                         | 2/74  |          |
| 1.75   | Physical Independence of Electric Systems                                                                                                                       | 9/78  | 2        |
| 1.76   | Design Basis Tornado for Nuclear Power Plants                                                                                                                   | 4/74  |          |
| 1.77   | Assumptions Used for Evaluating a Control Rod Ejection Accident for Pressurized Water Reactors                                                                  | 5/74  |          |
| 1.78   | Assumptions for Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release                                | 6/74  |          |
| 1.79   | Preoperational Testing of Emergency Core Cooling Systems for Pressurized Water Reactors                                                                         | 9/75  | 1        |
| 1.80   | Preoperational Testing of Instrument Air Systems                                                                                                                | 6/74  |          |
| 1.81   | Shared Emergency and Shutdown Electric Systems for Multi-Unit Nuclear Power Plants                                                                              | 1/75  | 1        |
| 1.82   | Sumps for Emergency Core Cooling and Containment Spray Systems                                                                                                  | 6/74  |          |
| 1.83   | Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes                                                                                         | 7/75  | 1        |
| 1.84   | Design and Fabrication Code Case Acceptability—ASME Section III Division I                                                                                      | 5/80  | 16       |
| 1.85   | Materials Code Case Acceptability—ASME Section III Division I                                                                                                   | 5/80  | 16       |
| 1.86   | Termination of Operating Licenses for Nuclear Reactors                                                                                                          | 6/74  |          |
| 1.87   | Guidance for Construction of Class 1 Components in Elevated-Temperature Reactors (Supplement to ASME Section III Code Classes 1592, 1593, 1594, 1595, and 1596) | 6/75  | 1        |



## REGULATORY GUIDES

| Number | Title                                                                                                                                                                      | Date                 | Revision |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------|
| 1.88   | Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records                                                                                      | 10/76                | 2        |
| 1.89   | Qualification of Class IÉ Equipment for Nuclear Power Plants                                                                                                               | 11/74                |          |
| 1.90   | Inservice Inspection of Prestressed Concrete Containment Structures With Grouted Tendons                                                                                   | 8/77                 | 1        |
| 1.91   | Evaluations of Explosions Postulated to Occur on Transportation Routes Near Nuclear Power Plants                                                                           | 2/78                 | 1        |
| 1.92   | Combining Modal Responses and Spatial Components in Seismic Response Analysis                                                                                              | 2/76                 | 1        |
| 1.93   | Availability of Electric Power Sources                                                                                                                                     | 12/74                |          |
| 1.94   | Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants | 4/76                 | 1        |
| 1.95   | Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release                                                                            | 2/77                 | 1        |
| 1.96   | Design of Main Steam Isolation Valve Leakage Control Systems for Boiling Water Reactor Nuclear Power Plants                                                                | 6/76                 | 1        |
| ➤ 1.97 | Instrumentation for Light-Water-Cooled Nuclear Power Plants To Assess Plant and Environs Conditions During and Following an Accident                                       | 12/80                | 2        |
| 1.98   | Assumptions Used for Evaluating the Potential Radiological Consequences of a Radioactive Offgas System Failure in a Boiling Water Reactor                                  | 3/76                 |          |
| 1.99   | Effects of Residual Elements on Predicted Radiation Damage to Reactor Vessel Materials                                                                                     | 4/77                 | 1        |
| 1.100  | Seismic Qualification of Electric Equipment for Nuclear Power Plants                                                                                                       | 8/77                 | 1        |
| 1.101  | Emergency Planning for Nuclear Power Plants                                                                                                                                | (withdrawn 10/21/80) |          |
| 1.102  | Flood Protection for Nuclear Power Plants                                                                                                                                  | 9/76                 | 1        |
| 1.103  | Post-Tensioned Prestressing Systems for Concrete Reactor Vessels and Containments                                                                                          | 10/76                | 1        |
| 1.104  | Overhead Crane Handling Systems for Nuclear Power Plants                                                                                                                   | ( withdrawn 8/22/79) |          |
| 1.105  | Instrument Setpoints                                                                                                                                                       | 11/76                | 1        |
| 1.106  | Thermal Overload Protection for Electric Motors on Motor-Operated Valves                                                                                                   | 3/77                 | 1        |

# UNITED STATES NUCLEAR REGULATORY COMMISSION RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

## COMMISSION NOTICES

## SYSTEMS OF RECORDS

### NRC Systems of Records

1. Appointment and Promotion Certificate Records—NRC
2. Biographical Information Records—NRC.
3. Byproduct Material License Records—NRC.
4. Conflict of Interest Files—NRC.
5. Contracts Records Files—NRC.
6. Development and Advancement for Regulatory Employees (DARE) Records—NRC.
- 7. Division of Technical Information and Document Control Workload Assignment and Production Records—NRC
8. Employee Appeals, Grievances and Complaints Records—NRC.
9. Equal Employment Opportunity Records Files—NRC.
10. Freedom of Information Act (FOIA) and Privacy Act Requests Records—NRC.
11. General Personnel Records (Official Personnel Folder and Related Records)—NRC.
12. Government Motor Vehicle Operators License File—NRC.
13. Incentive Awards File—NRC.
14. ~~Revoked~~
15. National Standards Committee Membership Files—NRC.
16. Facility Operator Licenses Records File (10 CFR Part 55)—NRC.
17. Occupational Injuries and Illness Records—NRC.
18. Office of Inspector and Auditor Index File and Associated Records—NRC.
19. Official Personnel Training Records Files—NRC.
20. Official Travel Records—NRC.
21. Payroll Accounting Records—NRC.
22. Personnel Performance Appraisals—NRC.

23. Personnel Research and Test Validation Records—NRC.

24. Property and Supply System (PASS)—NRC

25. Oral History Program—NRC.

26. Incorporated in NRC 29

27. Radiation Exposure Information and Reports System (REIRS) Files—NRC.

28. Recruiting, Examining and Placement Records—NRC.

29. Document Control System

30. Manpower System (MPS) Records—NRC.

➤ 31. Correspondence and Records Branch, Office of the Secretary, NRC.

32. Source and Special Nuclear Material License Records—NRC.

33. Deleted.

34. Advisory Committee on Reactor Safeguards (ACRS) Correspondence Index and Associated Records—NRC.

35. IE Household Move Survey—NRC.

36. Employee Locator Records Files—NRC.

37. Information Security Files and Associated Records—NRC.

38. Mailing Lists—NRC.

39. Personnel Security Files and Associated Records—NRC.

40. Facility Security Support Files and Associated Records—NRC.

These systems of records are those systems maintained by the Nuclear Regulatory Commission which contain personal information about individuals, and from which such information can be

retrieved by reference to an individual identified.

The notice for each system of records states the name and location of the record system, the authority for and manner of its operation, the categories of individuals which it covers, the types of records which it contains, the sources of information in those records, and the proposed "routine use" of each system of records. Each notice also includes the business address of the NRC official who will inform interested persons of the procedures whereby they may gain access to and correct records pertaining to themselves.

One of the purposes of the Privacy Act, as stated in Section 2(b)(4), is to provide certain safeguards for an individual against an invasion of personal privacy by requiring Federal agencies to "... disseminate any record of identifiable personal information in a manner that assures that such action is for a necessary and lawful purpose, that information is current and accurate for its intended use, and that adequate safeguards are provided to prevent misuse of such information." The NRC intends to follow such principles in transferring information to another agency or individual as a "routine use", including assuring that the information is relevant for the purposes for which it is transferred.

### ➤ Prefatory Statement of General Routine Uses

The following routine uses apply to each system of records notice set forth below which specifically references this Prefatory Statement.

## SYSTEMS OF RECORDS

➤ 1. In the event that a system of records maintained by the NRC to carry out its functions indicates a violation of law, whether civil, criminal or regulatory in nature, and whether arising by general statute or particular program statute, or by regulation, rules or order issued pursuant thereto, the relevant records in the system of records may be referred, as a routine use, to the appropriate agency, whether Federal, State, local or foreign, charged with the responsibility of investigating or prosecuting such violation or charged with enforcing or implementing the statute, or rule, regulation or order issued pursuant thereto.

2. A record from this system or records may be disclosed, as a routine use, to a Federal, State, local or foreign agency if necessary to obtain information relevant to an NRC decision concerning the hiring or retention of an employee, the issuance of a security clearance, the letting of a contract, or the issuance of a license, grant or other benefit.

3. A record from this system of records may be disclosed, as a routine use, to a Federal, State, local or foreign agency in response to its request, in connection with the hiring or retention of an employee, the issuance of a security clearance, the reporting of an investigation of an employee, the letting of a contract, or the issuance of a license, grant, or other benefit by the requesting agency, to the extent that the information is relevant and necessary to the requesting agency's decision on the matter.

4. A record from this system of records may be disclosed as a routine use, in the course of discovery and in presenting evidence to a court, magistrate, administrative tribunal, or grand jury, including disclosures to opposing counsel in the course of settlement negotiations.

5. Disclosure may be made to a Congressional office from the record of an individual in response to an inquiry from the congressional office made at the request of that individual.

6. A record from this system of records may be disclosed, as a routine use, to an NRC contractor on a "need to know" basis for a purpose within the scope of the pertinent NRC contract. Such access will be granted to an NRC contractor by a system manager only after satisfactory justification has been provided to the system manager.

### NRC-1

System name: Appointment and Promotion Certificate Records-NRC

Pursuant to 5 U.S.C. 552a(k)(5), the Commission has exempted portions of this system of records from 5 U.S.C. 552a(c)(3); (d); (e)(1); (e)(4)(G); (H), and (I), and (f). The exemption rule is contained in Section 9.95 of the NRC regulation (10 CFR 9.95).

System location: Division of Organization and Personnel, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

Categories of individuals covered by the system: Candidates for employment and NRC employees who are being considered for promotion and reassignment.

Categories of records in the system:

This system of records contains personnel qualification statements, vacancy announcements, applications for vacancies, selection certificates, the results of reference checks on employees, performance appraisals, and related records. The records pertain to specific announced vacancies which have been posted in accordance with the NRC Vacancy Announcement System.

Authority for maintenance of the system:

- a. 5 U.S.C. 1302 (1976);
- b. Section 161(d), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201 (d) (1976).

Routine uses of records maintained in the system, including categories of users and the purposes of such uses:

Information in these records may be used:

- a. To prepare reports for the Office of Personnel Management and Merit Systems Protection Board;
- b. By the Office of Personnel Management and Merit Systems Protection Board to resolve complaints and grievances regarding employment and promotion selection;
- c. For audit and review by the Office of Personnel Management and Merit Systems Protection Board; and
- d. For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

#### ➤ STORAGE:

Paper records are maintained in file folders in the Records Retention Center, St. Louis, Missouri. Microfiche records are kept in the Division of Organization and Personnel.

Retrievability: Information is accessed by vacancy announcement number, and by name within the individual vacancy announcement folders.

#### Safeguards:

Maintained in locked file cabinets. Access to and use of these records are limited to those persons whose official duties require such access.

#### ➤ RETENTION AND DISPOSAL:

Retained for 2 years from date of selection, then personal records are destroyed by shredding; nonpersonal records are destroyed through regular trash disposal system.

System manager(s) and address:

Chief, Personnel Operations Branch  
Division of Organization and Personnel  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Record access procedures: Same as "Notification procedure."

Contesting record procedures: Same as "Notification procedure."

Record source categories: Individual on whom the record is maintained, individual's current and previous supervisors, references, general personnel records (Official Personnel Folders and related records), and other Federal agencies.

### NRC-2

System name: Biographical Information Records-NRC

System location:

Office of Public Affairs, NRC, 7735 Old Georgetown Road, Bethesda, Maryland.

Categories of individuals covered by the system: Commissioners, members of the Atomic Safety and Licensing and Appeal Board Panels, and senior NRC staff members.

Categories of records in the system: These records contain information relating to education and training, and employment history, and other general biographical data relating to the Commissioners, members of the Atomic Safety and Licensing Board and Appeal Board Panels, and senior NRC staff members.

Authority for maintenance of the system:

## SYSTEMS OF RECORDS

a. Sections 201, 203(a), 204(a), 205(a), 209, Energy Reorganization Act of 1974, 42 U.S.C. 5841, 5843(a), 5844(a), 5845(a), 5849 (1976);

b. Section 191, Atomic Energy Act of 1954, as amended, 42 U.S.C. 2241 (1976).

Routine uses of records maintained in the system, including categories of users and the purposes of such uses: Information in these records may be used:

a. To provide information to the press;

b. To provide information to other persons and agencies requesting this information; and

c. For the routine use specified in paragraph number 5 and 6 of the Prefatory Statement.

**Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:**

**Storage:** Records are maintained in file folders.

**Retrievability:** Records are accessed by name.

### **SAFEGUARDS:**

Maintained in unlocked file cabinets. Access to and use of these records are limited to those persons whose official duties require such access.

### **RETENTION AND DISPOSAL:**

Retained until updated or association with NRC is discontinued, then destroyed through regular trash disposal system.

**System manager(s) and address:**

Director, Office of Public Affairs  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Notification procedure:**

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Record access procedures:** Same as "Notification procedure."

**Contesting record procedures:** Same as "Notification procedure."

**Record source categories:** Information in this system of records is provided by each individual and approved for use by the individual involved.

### **NRC-3**

**System name:** Byproduct Material License Records-NRC

### **SYSTEM LOCATION:**

Primary system-Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety and Safeguards, NRC.

7915 Eastern Avenue, Silver Spring, Maryland.

Duplicate system-duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Part 2, and the NIH computer facility, Bethesda, Maryland.

**Categories of individuals covered by the system:** Applicants and licensees (active and inactive) for byproduct materials licenses.

**Categories of records in the system:** Information contained in this system reflects data supplied by applicants and licensees and developed by the NRC staff in the license review and authorization process with respect to the possession and use of byproduct material. System component records developed and maintained by the NRC staff also include summary and index type data promoting quick access to and breakout of such information as:

a. Alphabetical listings of active and inactive license and applicants for licenses arranged by state and by a master listing;

b. Cross indexes of names to assigned license numbers;

c. Dates of license issuance and expiration; and

d. Geographic location of licensees by state and town.

**Authority for maintenance of the system:** Sec. 161(o), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201(o) (1976).

**Routine uses of records maintained in the system, including categories of users and the purpose of such uses:** Information in these records may be used:

a. To provide records to state health departments for their information and use;

b. To provide information to Federal, state and local health officials, and other persons in the event of incident or exposure, for purposes of their information, investigation and protection of public health and safety; and

c. For any of the routine uses specified in the Prefatory Statement.

In addition, certain of the information provided in this category is routinely placed in the NRC's Public Document Room.

**Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:**

### **STORAGE:**

Maintained on paper, index cards, computer tapes and printouts, microfilm, and mag cards.

**Retrievability:** System data is indexed by licensee/applicant name within state; alphabetically by licensee name within license expiration time periods; or assigned license number in juxtaposition with licensee name.

### **SAFEGUARDS:**

Maintained in unlocked file cabinet under visual control of files supervisor. Access to and use of these records are limited to those persons whose official duties require such access.

### **RETENTION AND DISPOSAL:**

Records are continuously changed or amended as new information is developed or individual licenses are cancelled or terminated; license files are transferred to Federal Records Center in Suitland, Maryland when they become inactive or terminated. Obsolete data, except for record copy maintained at Federal Records Center, is destroyed quarterly through regular trash disposal system.

**System manager(s) and address:**

Director, Division of Fuel Cycle and Material Safety  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Notification procedure**

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Record access procedures:** Same as "Notification procedure."

**Contesting record procedures:** Same as "Notification procedure."

**Record source categories:** Data supplied by applicants and licensees and developed by NRC technical staff.

### **NRC-4**

**System name:** Conflict of Interest Files-NRC

**System location:** Primary system—Office of the General Counsel, NRC, 1717 H Street, NW., Washington, DC.

Duplicate systems—duplicate systems exist in whole or in part, at the locations listed in Addendum I, Part 1.

**Categories of individuals covered by the system:** Persons who are employees, special employees and consultants of NRC.

## SYSTEMS OF RECORDS

### ➤ CATEGORIES OF RECORDS IN THE SYSTEM:

a. General biographical data (i.e., name, birthdate, home address, position title, home and business telephone, citizenship, educational history, employment history, professional society memberships, honors, fellowships received, publications, licenses, and special qualifications);

b. Financial status (i.e., nature of financial interests and in whose name held, creditors, character of indebtedness, interest in real property, monthly U.S. Civil Service Annuity, and status as Uniformed Services Retired Officer);

c. Certifications by employees that they and members of their families are in compliance with the Commission's stock ownership regulations;

d. Requests for approval of outside employment by NRC employees and NRC responses thereto;

e. Determination (i.e., no conflict or apparent conflict of interest, questions requiring resolution, steps taken toward resolution); and

f. Information pertaining to appointment (i.e., proposed period of NRC service, estimated number of days of NRC employment during period of service, proposed pay, clearance status, description of services to be performed and explanation of need for the services, justification for proposed pay, description of expenses to be reimbursed and dollar limitation, and description of government-owned property to be in possession of appointee).

### ➤ AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

a. 18 U.S.C. 201 (1976);

b. Executive Order 11222, May 8, 1965;

c. 10 CFR 0.735-29; 10 CFR 0.735-40.

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used:

a. General biographical data (i.e., name, birthdate, home address, position title, home and business telephone, citizenship, educational history, employment history, professional society membership, honors, fellowships received, publications, licenses, and special qualifications);

b. To provide the U.S. Department of Justice, the Office of Personnel Management and Merit Systems Protection Board with information concerning an employee in instances where this office has reason to believe a Federal law may have been violated or where this office desires the advice of the Department or the Office concerning potential violations of Federal law;

c. Determination (i.e., no conflict or apparent conflict of interest, questions

requiring resolution, steps taken toward resolution); and

d. Information pertaining to appointment (i.e., proposed period of NRC service, estimated number of days of NRC employment during period of service, proposed pay, clearance status, description of services to be performed and explanation of need for the services, justification for proposed pay, description of expenses to be reimbursed and dollar limitation, and description of government owned property to be in possession of appointee).

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

Storage: Records are maintained in file folders.

Retrievability: Records are accessed by name.

### SAFEGUARDS:

Maintained in locked file cabinets.

### RETENTION AND DISPOSAL:

Retained in office file for 2 years after employee leaves position in which statement is required, or for 2 years after separation, whichever is earlier, then forwarded to the Federal Records Center, Suitland, Maryland.

System manager(s) and address:

General Counsel

Office of the General Counsel

U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Notification procedure:

Director, Office of Administration

U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Record access procedures: Same as "Notification procedure."

Contesting record procedures: Same as "Notification procedure."

Record source categories: Information in this system of records either comes from the individual to whom it applies, or is derived from information he or she supplied, or comes from the office to which the individual is to be assigned.

### NRC-5

System name: Contracts Records Files—NRC

Pursuant to 5 U.S.C. 552a(k)(1) and (5), the Commission has exempted portions of this system of records from 5 U.S.C. 552a(c)(3), (d), (e)(1), (e)(4)(G), (H), and (I), and (f). The exemption rule

is contained in Section 9.95 of the NRC regulation (10 CFR 9.95).

System location: Primary system—Division of Contracts, NRC, 7915 Eastern Avenue, Silver Spring, Maryland.

Duplicate systems—duplicate systems exist, in whole or in part, at locations listed in Addendum I, Part 1 and Part 2.

Categories of individuals covered by the system: Persons who are employed as NRC consultants or contractors.

Categories of records in the system: These records contain personal information (such as technical qualifications, education, rates of pay, employment history) of contractors and their employees, and other contracting records.

Authority for maintenance of the system: a. Sections 31 and 161, Atomic Energy Act of 1954, as amended, 42 U.S.C. 2051 and 2201.

b. Section 205, Energy Reorganization Act of 1974, 42 U.S.C. 5845 (1976).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used:

a. To provide information to Department of Health, Education and Welfare, Defense Contract Audit Agency, General Accounting Office, and other Federal agencies for audits and reviews; and

b. For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

Storage: Records are maintained in file folders.

### RETRIEVABILITY:

Accessed by contract number and purchase order number, cross-referenced with the name of the consultant, contractor, or vendor.

Safeguards: Maintained in unlocked conserved files. Access to and use of these records are limited to those persons whose official duties require such access.

### RETENTION AND DISPOSAL:

Contracts greater than \$10,000 are destroyed 6 years and 6 months after final payment; \$10,000 or less—3 years



## SYSTEMS OF RECORDS

after final payment. Records are destroyed through regular trash disposal system, except for confidential business (proprietary) information which is destroyed by shredding.

**System manager(s) and address:**

Director, Division of Contracts  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20055

**Notification procedure:**

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### RECORD ACCESS PROCEDURES:

Same as "notification procedure." Some information was received in confidence and will not be disclosed to the extent that disclosure would reveal confidential business (proprietary) information.

Contesting record procedures: Same as "Notification procedure."

Record source categories: Information in this system of records comes from the contractor or potential contractor.

### NRC-6

**System name:** Development and Advancement for Regulatory Employees (DARE) Records-NRC

Pursuant to 5 U.S.C. 552a(k)(5) and (6), the Commission has exempted portions of this system of records from 5 U.S.C. 552a(c)(3), (d), (e)(1), (e)(4)(G), (H), and (I), and (f). The exemption rule is contained in Section 9.95 of the NRC regulation (10 CFR 9.95).

### SYSTEM LOCATION:

Division of Organization and Personnel, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

Categories of individual covered by the system: NRC employees who desire to enhance their training and experience qualifications for movement into administrative, paraprofessional and professional ranks.

Categories of records in the system: This system of records contains personnel qualification statements, job descriptions, self-evaluation forms, examination results, supervisory evaluation forms, performance appraisals, DARE counselors' reports, training guides, course plans and related correspondence.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

- 42 U.S.C. 2000e (1976);
- Section 401, Energy Reorganization Act of 1974, 42 U.S.C. 5871 (1976);
- E.O. 11478, August 8, 1969.

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES

Information in these records may be used:

- To prepare reports for transmittal to the Office of Personnel Management and Merit Systems Protection Board;
- For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

Storage: Paper records maintained in file folders.

Retrievability: Information accessed by name.

Safeguards: Records are maintained in locked desk drawer and access is limited to those persons whose official duties require such access. Personnel screening is employed to prevent unauthorized disclosure.

### RETENTION AND DISPOSAL:

Active records retained indefinitely. Inactive records are sent to the National Personnel Records Center within 30 days of the date of the employee's separation from the Federal service and records of non-selected applicants retained up to 1 year, then destroyed by shredding.

**System manager(s) and address:**

a. DARE Program Coordinator  
Division of Organization and Personnel  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Notification procedure:**

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Record access procedures: Same as "Notification procedure." Some information was received in confidence and will not be disclosed to the extent that disclosure would reveal a confidential source. Testing material may not be disclosed to the extent such disclosure would compromise the testing process.

Contesting record procedures: Same as "Notification procedure."

Record source categories: Individual on whom the record is maintained, individual's current and previous supervisors within and outside NRC, and the DARE counselors and program coordinator.

### NRC-7

### SYSTEM NAME:

Division of Technical Information and Document Control Workload Assignment and Production Records-NRC

### SYSTEM LOCATION:

Primary system—Division of Technical Information and Document Control, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Part 1(a), (b), (e), (f), and (g).

Categories of individuals covered by the system: NRC employees assigned to word processing and printing /reproduction and graphic units.

Categories of records in the system: These records contain, under employee name, listings of work assignments and individual production records.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

- Section 161(d), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201(d) (1976);
- 31 U.S.C. 21, 22, 24, 49, 54, and 66a (1976).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES

Information in these records may be used by the Division of Technical Information and Document Control for any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

### STORAGE:

Maintained on paper and log sheets.

Retrievability: Indexed by employee name within period reports.

### SAFEGUARDS:

Files relating to comparative employee production and analysis thereof are maintained in locked desks. Budgetary and staffing projection data are maintained in locked and unlocked files. All files are under immediate control of the supervisory staff.

## SYSTEMS OF RECORDS

### RETENTION AND DISPOSAL:

Records are retained in office files for two years, and then destroyed by regular trash disposal system.

### SYSTEM MANAGER(S) AND ADDRESS:

Director, Division of Technical Information and Document Control, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Record access procedures: Same as "Notification procedure."

Contesting record procedures: Same as "Notification procedure."

Record source categories: Individual employees; supervisory assignment and analysis records.

### NRC-8

System name: Employee Appeals, Grievances and Complaints Records-NRC

### SYSTEM LOCATION:

Primary system—Division of Organization and Personnel, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at locations listed in Addendum I, Parts 1 and 2.

### CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Applicants for NRC employment, current and former NRC employees, and annuitants who have filed complaints or initiated grievance or appeal proceedings as a result of a determination made by the NRC, the Office of Personnel Management and Merit Systems Protection Board, or a Board or other entity established to adjudicate such grievances and appeals.

### CATEGORIES OF RECORDS IN THE SYSTEM:

Includes all documents related to grievances, arbitrations, negative determinations regarding within-grade salary increases and exit interviews. It contains information relating to determinations affecting individuals made by the NRC or the Office of Personnel Management and Merit Systems Protection Board. The records consist of the initial appeal or complaint, letters or notices to the individual, record of hearings when

conducted, materials placed into the record to support the decision or determination, affidavits or statements, testimony of witnesses, investigative reports, instructions to an NRC office or division concerning action to be taken to comply with decisions, and related correspondence, opinions, and recommendations.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

Section 161(d), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201(d) (1976).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used:

- To furnish information to the Office of Personnel Management and Merit Systems Protection Board pursuant to applicable requirements relative to grievances and appeals;
- To provide appropriate data to union representatives and third parties in connection with grievances, arbitration actions and appeals. Third parties may include the Federal Service Impasses Panel and Federal Labor Relations Authority; and
- For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

Storage: These records are maintained in file folders, binders, and index cards.

Retrievability: These records are indexed by the names of the individuals on whom they are maintained.

### SAFEGUARDS:

Maintained in locked file cabinets. Access to and use of these records are limited to those persons whose official duties require such access.

### RETENTION AND DISPOSAL:

Retained 3 years after case is closed, then destroyed by shredding.

### System manager(s) and address:

Chief, Labor Management and Employee Relations Branch  
Division of Organization and Personnel  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Record access procedures: Same as "Notification procedure." Some information was received in confidence and will not be disclosed to the extent that disclosure would reveal a confidential source.

Contesting record procedures: Same as "Notification procedure."

### RECORD SOURCE CATEGORIES:

Individuals to whom the record pertains; NRC and/or Office of Personnel Management and Merit Systems Protection Board officials; affidavits or statements from employees, union representatives, or other persons; testimony of witnesses; and official documents relating to the appeal, grievance, or complaint; Official Personnel Folder; and other Federal agencies.

### NRC-9

System name: Equal Employment Opportunity Records Files-NRC

Pursuant to 5 U.S.C. 552a(k)(5), the Commission has exempted portions of this system of records from 5 U.S.C. 552a(c)(3), (d), (e)(1), (e)(4)(G), (H), and (I), and (f). The exemption rule is contained in Section 9.95 of the NRC regulation (10 CFR 9.95).

System location: Office of Equal Employment Opportunity, NRC, 7735 Old Georgetown Road, Bethesda, Maryland.

Categories of individuals covered by the system: Applicants for NRC employment and current and former NRC employees who have filed a complaint of discrimination with the Office of Equal Employment Opportunity or the Equal Employment Opportunity Officer.

Categories of records in the system: This system of records contains copies of written reports by counselors; the investigative file; documentation of withdrawn, cancelled, rejected and/or adjusted discrimination complaints; complainant's name, title and grade; kind or discrimination alleged; description of action, decision, or condition giving rise to the complaint; description of remedial action; description of disciplinary action, if any; and copy of the letter of proposed disposition of the complaint and right to a hearing; and record of appeals examiner's finding, analysis, and recommended decision.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

a. 42 U.S.C. 2000e (1976);

## SYSTEMS OF RECORDS

b. Section 401, Energy Reorganization Act of 1974, 42 U.S.C. 5891 (1976);

c. Executive Orders 11248, Sept. 24, 1965; 11375, Oct. 13, 1967; and 11478, Aug. 8, 1969.

Routine uses of records maintained in the system, including categories of users and the purposes of such uses: Information in these records may be used:

a. To furnish information relative to EEO matters to the Office of Personnel Management and Merit Systems Protection Board in accordance with applicable requirements;

b. For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

### STORAGE:

Maintained in file folders, binders, index cards, and on computer tapes (minority code only).

Retrievability: Accessed by name.

Safeguards: Access to and use of these records are limited to those persons whose official duties require such access. Records are maintained in locked file cabinets.

### RETENTION AND DISPOSAL:

Retained indefinitely.

### System manager(s) and address:

Director  
Office of Equal Employment  
Opportunity  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Record access procedures: Same as "Notification procedure." Some information was received in confidence and will not be disclosed to the extent that disclosure would reveal a confidential source.

Contesting record procedures: Same as "Notification procedure."

### RECORD SOURCE CATEGORIES:

Individual to whom the record pertains, counselors, NRC and/or the Office of Personnel Management and Merit Systems Protection Board officials, affidavits or statements from employees, testimony of witnesses, and official documents relating to the complaints.

### NRC-10

System name: Freedom of Information Act (FOIA) and Privacy Act (PA) Requests Records—NRC

System location: Primary system—Division of Rules and Records, Office of Administration, NRC, 7735 Old Georgetown Road, Bethesda, Maryland.

Duplicate systems—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Part 1 and Part 2 and at the TERA computer facility, Bethesda, Maryland.

Categories of individuals covered by the system: Persons who have made FOIA or Privacy Act requests for NRC records.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

- a. 5 U.S.C. 552 (1976);
- b. 5 U.S.C. 552a (1976).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used:

- a. If an appeal or Court suit is filed with respect to any records denied;
- b. For preparation of annual reports required by 5 U.S.C. 552 and 5 U.S.C. 552a;
- c. For any of the routine uses specified in the Prefatory Statement;
- d. Most of the FOIA records are placed in the NRC Public Document Room and made available to the public.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

Storage: Records are maintained in file folders.

### RETRIEVABILITY:

ACCESSED BY CHRONOLOGICALLY ASSIGNED NUMBER AND INDIVIDUAL NAME.

### SAFEGUARDS:

Privacy Act records are maintained in locked file cabinets. Access to and use of these records are limited to those persons whose official duties require such access. Copies of most of the FOIA

records are publicly available in the NRC Public Document Room.

### RETENTION AND DISPOSAL:

Retained 2 years from date of reply if request is granted, 5 years if denied, and 4 years if appealed. Except for classified, proprietary, and other sensitive information which is destroyed by shredding, records are disposed of through regular trash disposal system.

### System manager(s) and address:

Director, Division of Rules and Records  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Record access procedures: Same as "Notification procedure."

Contesting record procedures: Same as "Notification procedure."

Record source categories: Requests are made by individuals or other requesters. The response to the request is based upon information contained in NRC records.

### NRC-11

System name: General Personnel Records (Official Personnel Folder and Related Records)—NRC

Pursuant to 5 U.S.C. 552a(k)(5) and (6), the Commission has exempted portions of this system of records from 5 U.S.C. 552a(c)(3), (d), (e)(1), (e)(4)(G), (H), and (I), and (f). The exemption rule is contained in Section 9.95 of the NRC regulations (10 CFR 9.95).

### SYSTEM LOCATION:

Primary system—Division of Organization and Personnel, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Parts 1 and 2; and at the Department of Energy computer facility, Germantown, Maryland; and at the National Institutes of Health computer facility, Bethesda, Maryland. The duplicate systems maintained in a particular office, division or branch may contain information of specific application to employees in that organization in addition to that information contained in the primary system.

Categories of individuals covered by the system: Current NRC employees, consultants, and those formerly em-

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played by the NRC (death, resignation, retirement, and separation).

### CATEGORIES OF RECORDS IN THE SYSTEM:

These records contain information about an individual's birth date, social security account number, veteran preference status, tenure, physical handicaps, past and present salaries, grades, position titles, training, test performance, minority group designator, life insurance, health benefits, beneficiaries, personnel performance appraisals, the results of reference checks, probationary period appraisals, and awards. Some folders in the primary system may contain medical records in sealed brown envelopes (i.e. participation in occupational health services program, capability to perform position duties, etc.). This system also contains letters of commendation and reprimand, documentation of charges and decisions on charges, notices of reductions-in-force, locator files; information related to personnel actions, including but not limited to appointment, reassignment, demotion, detail, promotion, transfer, and separation; and data documenting the reasons for personnel actions or decisions made about an individual related to the status of the individual. Some duplicate records may also contain office-related employee performance evaluations, office-specific applications, personnel qualification statements (SF-171), resumes and applicant evaluations and conflict of interest correspondence, and other related personnel records in addition to those contained in the primary system.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

- a. Section 161(d), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201(d) (1976);
- b. E.O. 10561, September 15, 1954;
- c. 5 U.S.C. 7901 (1976);
- d. 42 U.S.C. 4561 (1976);
- e. 21 U.S.C. 1180 (1976).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used:

- a. By the Office of Personnel Management and Merit Systems Protection Board for making a decision when an NRC employee or former NRC employee questions the validity of a specific document in an individual's record;
- b. To provide information to a prospective employer of a government employee. Upon transfer of the employee to another Federal agency, the information is transferred to such agency;

c. To update the Office of Personnel Management Systems concerning the Central Personnel Data File (CPDF), the Executive Inventory File and security investigations index hires, and to update adverse actions and terminations records of the Merit Systems Protection Board;

d. To provide statistical reports to Congress, agencies, and the public on characteristics of the Federal work force;

e. To provide information to the Office of Personnel Management and Merit Systems Protection Board for review and audit purposes;

f. To provide members of the public with the names, position titles, grades, salaries, appointments (temporary or permanent), and duty stations of employees;

g. Medical records may be used for providing information to the Public Health Service in connection with Health Maintenance Examinations and to other Federal agencies responsible for Federal benefit programs administered by the Department of Labor (Office of Workmen's Compensation Programs) and the Office of Personnel Management; and

h. For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

Storage: Records are maintained in file folders, magnetic tape, disk, punched cards and microfilm.

Retrievability: Records are indexed by any combination of name, birth date, social security account number, or identification number.

### SAFEGUARDS:

Maintained in locked and unlocked file cabinets and electro-mechanical file organizer. Access to and use of these records are limited to those persons whose official duties require such access.

### RETENTION AND DISPOSAL:

The Official Personnel Folder is sent to the National Personnel Records

Center within 30 days of the date of the employee's separation from the Federal service. Some records such as letters of reprimand, indebtedness and vouchers are maintained for two years or destroyed by shredding when an individual resigns, transfers or is separated from the Federal service. SF-1, "Service Record Card," is retained indefinitely after separation or transfer.

### System manager(s) and address:

Chief, Personnel Operations Branch  
Division of Organization and Personnel  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Record access procedures: Same as "Notification procedure." Some information was received in confidence and will not be disclosed to the extent that disclosure would reveal a confidential source. Testing material may not be disclosed to the extent that disclosure would compromise the testing process.

Contesting record procedures: Same as "Notification procedure."

### RECORD SOURCE CATEGORIES:

Information in this system of records comes from the individual to whom it applies, is derived from information supplied by that individual, or is provided by agency officials, other Federal agencies, or persons, including references, private and Federal physicians, and medical institutions.

### NRC-12

System name: Government Motor Vehicle Operators License File-NRC

### SYSTEM LOCATION:

Primary system-Building and Operations Support Branch, Division of Facilities and Operations Support, Office of Administration, NRC, 7735 Old Georgetown Road, Bethesda, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Part 2.

Categories of individuals covered by the system: NRC Headquarters and Regional Office employees licensed to drive government vehicles.

Categories of records in the system: These records contain identifying data on individuals, including but not limited to name, social security account number, hair color, and sex.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

- a. 40 U.S.C. 491 (1976);
- b. E.O. 10579, December 1, 1954.



## SYSTEMS OF RECORDS

Routine uses of records maintained in the system, including categories of users and the purpose of such uses: The records may be used for any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

### STORAGE:

Maintained on index cards and on paper in file folders.

**Retrievability:** Indexed alphabetically by employee name.

### SAFEGUARDS:

Maintained in locked file cabinets under control of supervisors. Access to and use of these records are limited to those persons whose official duties require such access.

### RETENTION AND DISPOSAL:

Retained for 3 years or until cancellation of individual license, whichever comes first, then destroyed through regular trash disposal system.

**System manager(s) and address:**

Chief, Building and Operations Branch  
Division of Facilities and Operations  
Support

Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Notification procedure:**

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Record access procedures:** Same as "Notification procedure."

**Contesting record procedures:** Same as "Notification procedure."

**Record source categories:** Individuals on whom the record is maintained and medical examiners.

### NRC-13

**System name:** Incentive Awards File—NRC

### SYSTEM LOCATION:

Primary system—Division of Organization and Personnel, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the location listed in Addendum I, Part 2.

### CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

NRC employees who merit special recognition for achievements either within or outside the employee's job

responsibilities and for length of service to the Government. Awards include both NRC awards and awards of other agencies and organizations for which NRC employees are eligible.

### Categories of records in the system:

This system of records contains employee's name, title, grade, and salary; justification to support recommendation and authorization for cash award; actions by approving officials; record of individuals receiving awards; suggestions and evaluations of suggestions; citation to be used; and related correspondence.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

- a. 5 U.S.C. 4501-4506 (1976);
- b. 5 U.S.C. 5336 (1976).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used:

- a. By the Office of Personnel Management and Merit Systems Protection Board to process and approve nominations or awards;
- b. By the Office of the Attorney General and the President of the United States in reviewing recommended awards;
- c. To make reports to the Office of Personnel Management and Merit Systems Protection Board;
- d. By other government agencies to recommend whether suggestions should be adopted in instances where the suggestion made by an NRC employee affects the functions or responsibilities of the agencies; and
- e. For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

### STORAGE:

Maintained on paper in file folders.

**Retrievability:** Information is accessed by name.

### SAFEGUARDS:

Maintained in unlocked file cabinets. Access to and use of these records are limited to those persons whose official duties require such access.

### RETENTION AND DISPOSAL:

Retained for 2 years, then destroyed by shredding.

**System manager(s) and address:**

Chief, Labor Management and Em-

ployee Relations Branch  
Division of Organization and Personnel  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Notification procedure:**

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Record access procedures:** Same as "Notification procedure."

**Contesting record procedures:** Same as "Notification procedure."

### RECORD SOURCE CATEGORIES:

Supervisors of employees, individuals submitting suggestions, evaluators of suggestions, Division of Organization and Personnel Staff, Office of Personnel Management and Merit Systems Protection Board, Official Personnel Folders, and other Federal agencies.

NRC 14 is REVOKED.

### NRC-15

**System name:** National Standards Committee Membership Files—NRC

**System location:** Primary system—Office of Standards Development, NRC, 5650 Nicholson Lane, Rockville, Md.

Duplicate systems—Duplicate systems exist in whole or in part at the National Institute of Health Computer Facility, c/o the Office of Management and Program Analysis located in the Maryland National Bank Building, 7735 Old Georgetown Road, Bethesda, Md.

**Categories of individuals covered by the system:** NRC employees who are serving on committees, subcommittees, working groups, etc., that are developing nuclear standards.

### CATEGORIES OF RECORDS IN THE SYSTEM:

This system is a comprehensive record of NRC personnel on the nuclear standards committees and contains members' names, the names of the committees to which they belong, and the names of the NRC offices in which the members work.

**Authority for maintenance of the system:** Section 161(b), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201(b).

**Routine uses of records maintained in the system, including categories of users and the purposes of such uses:** These records may be used:



## SYSTEMS OF RECORDS

a. To provide information to persons or agencies requesting this information, including but not limited to: (1) Persons using the NRC Public Document Room, and (2) the Department of Energy RDT Standards Office of Oak Ridge National Laboratory (ORNL), Oak Ridge, Tenn. ORNL uses this information as part of a document titled, "Personnel Involved in the Development of Nuclear Standards in the United States" and the National Technical Information Service, U.S. Department of Commerce, sells this document to the public.

b. For the routine use specified in paragraph No. 5 of the Prefatory Statement.

**Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:**

**Storage:** Records are maintained on lists and computer tape and disk.

**Retrievability:** Records are indexed by the individual's name, by individual's office or region and by the committee title.

### SAFEGUARDS:

Maintained in unlocked file cabinet.

### RETENTION AND DISPOSAL:

Updated when information is out of date. The information is retained until the person is no longer a member of the committee or no longer an NRC employee, whichever occurs first.  
Destroyed by computer deletion.

**System manager(s) and address:**

Director  
Office of Standards Development  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Notification procedure:**

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Record access procedures:** Same as "Notification procedure."

**Contesting record procedures:** Same as "Notification procedure."

**Record source categories:** Information in this system or records comes from the individual to whom it applies or from his supervisor.

### NRC-16

**System name:** Facility Operator Licensees Records File (10 CFR Part 55)-NRC.

### SYSTEM LOCATION:

Primary system-Operating Licensing Branch, Division of Project Management, Office of Nuclear Reactor Regulation, NRC, 7920 Norfolk Avenue, Bethesda, Maryland.

Duplicate system-duplicate systems exist, in whole or in part, at the Department of Energy, Germantown, Maryland.

**Categories of individuals covered by the system:** Individuals licensed pursuant to 10 CFR Part 55, new applicants whose applications are being processed, and individuals whose licenses have expired.

**Categories of records in the system:** These records contain information relating to the application for a license, certification of competency, certification of medical history and results of medical examination and related correspondence, operator examination and examination results, and license or denial letter.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

Sections 107, 161(j), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2137 and 2201(i)(1976).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used:

a. To determine if the individual meets the requirements of 10 CFR Part 55 to take an examination or to be issued an operator's license;

b. For any of the routine uses specified in the Prefatory Statement, except paragraph number 3;

c. To provide researchers with information for statistical evaluations related to selections, training and examination of facility operators;

d. To provide for examination and testing material and obtain results from contractors; and

e. To provide facility management with sufficient information to enroll the individuals in the licensed operator requalification program.

**Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:**

### STORAGE:

Maintained on index cards and on paper in file folders.

**Retrievability:** Records are accessed by name and docket number.

### SAFEGUARDS:

Maintained in locked file cabinets. Access to and use of these records are limited to those persons whose official duties require such access.

### RETENTION AND DISPOSAL:

**Reactor Operator Licensees Records:**

a. Medical information: retained for 4 years after the individual's license expires, then destroyed;

b. Examination and examination results: retained for 2 years after the issuance of a license or denial letter. A summary report is retained until 4 years after the individual's license expires;

c. Other information: destroyed when it becomes 2 years old;

d. Docket information: destroyed 4 years after an individual's latest license expires.

Records are destroyed by shredding.

### SYSTEM MANAGER(S) AND ADDRESS:

Chief, Operator Licensing Branch, Division of Project Management, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

**Notification procedure:**

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Record access procedures:** Same as "Notification procedure."

**Contesting record procedures:** Same as "Notification procedure."

### RECORD SOURCE CATEGORIES:

Information in this system comes from the individual applying for a license, the facility manager, a licensed physician, members of the Operator Licensing Branch, and contractor personnel.

### NRC-17

**System name:** Occupational Injuries and Illness Reports-NRC

**System location:** Building and Operations Branch, Division of Facilities and Operations Support, Office of Administration, NRC, 7735 Old Georgetown Road, Bethesda, Maryland.

Duplicate system-duplicate systems exist, in whole or in part, at the location listed in Addendum I, Part 1(c).

### CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

NRC employees who report an occupational injury or illness.

## SYSTEMS OF RECORDS

**Categories of records in the system:**  
These records contain descriptions of injury or illness, treatment, and disposition.

### **AUTHORITY FOR MAINTENANCE OF THE SYSTEM:**

- a. 29 U.S.C. 657(c) (1976);
- b. E. O. 11807, September 28, 1974.

### **ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:**

Information in these records may be used:

- a. By the NRC Safety Officer and/or Branch supervisor, to prepare periodic statistical reports on employees' health and injury status and health and safety hazards in NRC physical structures, all for transmission to and review by the Department of Labor;
- b. For transmittal to the Secretary of Labor or his authorized representative in accordance with duly promulgated regulations;
- c. For transmittal to the Office of Personnel Management and Merit Systems Protection Board as required to support individual claims; and
- d. For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

### **STORAGE:**

Maintained on paper in file folders.

**Retrievability:** Indexed by assigned employee case number or name under report category.

### **SAFEGUARDS:**

Maintained in locked file cabinet under visual control of section employees. Access to and use of these records are limited to those persons whose official duties require such access.

### **RETENTION AND DISPOSAL:**

Retained for 5 years after date of report, then destroyed by shredding.

**System manager(s) and address:**

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Notification procedure:** Same as "System manager."

**Record access procedures:** Same as "System manager."

**Contesting record procedures:** Same as "System manager."

**Record source categories:** NRC Public Health Unit, NRC Headquarters and Regional Office feeder reports and forms with original information largely supplied by employees concerned.

### **NRC-18**

**System name:** Office of Inspector and Auditor Index File and Associated Records-NRC.

Pursuant to 5 U.S.C. 552a(k)(1), (k)(2) and (k)(5), the Commission has exempted portions of this system of records from 5 U.S.C. 552a(c)(3), (d), (e)(1), (e)(4)(G), (H), and (I), and (f). The exemption rule is contained in Section 9.95 of the NRC regulation (10 CFR 9.95).

### **SYSTEM LOCATION:**

Office of Inspector and Auditor, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

**Categories of individuals covered by the system:** Individuals referred to in potential or actual cases and matters of concern to the Office of Inspector and Auditor and correspondents on subjects directed or referred to the Office of Inspector and Auditor.

**Categories of records in the system:** The system consists of an alphabetical index file bearing individual names. The index provides access to associated records which are arranged by subject matter, title, or identifying number(s) and/or letter(s). The system incorporates the records of all Office of Inspector and Auditor correspondence, cases, matters, memoranda, and materials, including but not limited to audit reports, investigative reports, inspection reports, correspondence to and from the Office of Inspector and Auditor, memoranda, legal papers, evidence, exhibits, audit data, investigative data, and work papers.

### **➤ AUTHORITY FOR MAINTENANCE OF THE SYSTEM:**

- a. Subsections 25(c) and 161(c) of the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2035(c) and 2201(c)(1976);
- b. Subsection 201(f), Energy Reorganization Act of 1974, 42 U.S.C. 5841(f)(1976).

### **ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:**

a. A record in the system of records may be disclosed as a routine use to a Federal, State, local, or foreign agency or to an individual or organization, if the disclosure is reasonably necessary to elicit information or to obtain the

cooperation of a witness or an informant.

b. A record in the system of records relating to a case or matter falling within the purview of the Office of Inspector and Auditor that has been referred for audit, inspection or investigation may be disclosed as a routine use to the referring agency, group, organization or individual to notify such agency, group, organization or individual of the status of the case or matter or of any decisions or determinations that has been made.

c. A record in the system of records relating to an individual held in custody pending arraignment, trial, or sentence, or after conviction, may be disclosed as a routine use to a Federal, State, local or foreign prison, probation, parole or pardon authority, or to any agency or individual concerned with the maintenance, transportation, or release of such an individual.

d. A record in the system of records relating to a case or matter may be disclosed as a routine use to a foreign country pursuant to an international treaty or convention entered into and ratified by the United States.

e. A record in the system of records may be disclosed as a routine use to a Federal, State, local or foreign law enforcement agency to assist in the general crime prevention and detection efforts of the recipient agency or to provide investigative leads to such agency.

f. A record in the system of records in the nature of an audit, inspection or investigation report relating to the integrity and efficiency of the Commission operation and management may be disseminated outside the Commission as part of the Commission's responsibility to inform the Congress and the public about Commission operations.

g. A record in the system of records may be disclosed for any of the routine uses specified in the Prefatory Statement.

## SYSTEMS OF RECORDS

h. A record in the system of records relating to a case or matter may be disclosed as a routine use to a foreign country pursuant to an international treaty or convention entered into and ratified by the United States.

i. A record in the system of records may be disclosed as a routine use to a Federal, State, local or foreign law enforcement agency to assist in the general crime prevention and detection efforts of the recipient agency or to provide investigative leads to such agency.

j. A record may be disclosed from the system of records as a routine use to a Federal, State, local or foreign agency in connection with the investigation, hiring or retention of an employee, the issuance of a security clearance, the letting of a contract, or the issuance of a license, grant, or other benefit by the requesting agency to the extent that the information relates to the requesting agency's decision on the case or matter.

k. A record from the system of records may be disclosed as a routine use to a Federal, State, local or foreign agency if necessary to obtain information relevant to a Commission decision concerning the investigation, hiring, or retention of an employee, the issuance of a security clearance, the letting of a contract, or the issuance of a license, grant or other benefit.

l. A record in the system of records in the nature of an audit, inspection or investigation report relating to the integrity and efficiency of the Commission operation and management may be disseminated outside the Commission as part of the Commission's responsibility to inform the Congress and the public about Commission operations.

m. A record in the system of records may be disclosed for the routine use specified in paragraph numbers 5 and 6 of the Prefatory Statement.

**Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:**

**Storage:** Information contained in this system is stored manually on index cards and in file jackets.

**Retrievability:** Information is retrieved from index cards by the name of the individual and from the jackets by number(s) and/or letter(s) assigned and appearing on the index card.

### SAFEGUARDS:

The index is maintained in unlocked file cabinets and the associated records are located in lockable metal filing cabinets or safes. All records are under visual control during normal working hours, available only to authorized personnel whose duties require access, and stored in a room that is locked after normal working hours.

### RETENTION AND DISPOSAL:

Retained 10 years in NRC storage, then destroyed by shredding.

#### System manager(s) and address:

Director  
Office of Inspector and Auditor  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

#### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### RECORD ACCESS PROCEDURES:

Same as "Notification procedure." Information classified pursuant to Executive Order 12065 will not be disclosed.

Information received in confidence will not be disclosed to the extent that disclosure would reveal a confidential source.

**Contesting record procedures:** Same as "Notification procedure."

**Record source categories:** The information in this system of records is obtained from sources including, but not limited to, U.S. Nuclear Regulatory Commission officers and employees, Federal, State, local, and foreign agencies, and persons.

## NRC-19

**System name:** Official Personnel Training Records Files-NRC

### SYSTEM LOCATION:

Primary system-Management Development and Training Staff, Office of Administration, NRC, 7735 Old Georgetown Road, Bethesda, Maryland. Duplicate system-duplicate systems, exist in whole or in part, at the locations listed in Addendum I, Part 1(a), (b), (c), (d), (e), (f), and (g), and Part 2.

**Categories of individuals covered by the system:** Individuals who have applied for or were selected for either NRC or other government/non-government training courses or programs.

**Categories of records in the system:** These records contain information relating to the NRC employee's educational background and training courses including training requests, authorizations for training, course grades or evaluations and other related personnel training information and correspondence.

**Authority for maintenance of the system:**

- a. 5 U.S.C. 4103 (1976);
- b. E.O. 11348, April 20, 1967.

**Routine uses of records maintained in the system, including categories of users and the purposes of such uses:**

Information in these records may be used:

- a. For use in training programs related to NRC employees by the Office of Personnel Management, other Federal, state, and local government agencies and educational institutions; and
- b. For the routine use specified in paragraph numbers 5 and 6 of the Prefatory Statement.

**Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:**

### STORAGE:

Maintained on paper in file folders.

**Retrievability:** Information is accessed by name.

### SAFEGUARDS:

Maintained in locked file cabinets. Access to and use of these records are limited to those persons whose official duties require such access.

### RETENTION AND DISPOSAL:

Retained for 5 years, or until no longer needed, then destroyed through regular trash disposal system.

## SYSTEMS OF RECORDS

### SYSTEM MANAGER(S) AND ADDRESS:

Director, Management Development and Training Staff, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

#### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Record access procedures:** Same as "Notification procedure."

**Contesting record procedures:** Same as "Notification procedure."

### RECORD SOURCE CATEGORIES:

Information is provided by the individual to whom it applies, the employee's supervisor, and training groups, agencies, or educational institutions.

NRC-20

**System name:** Official Travel Records—NRC

### SYSTEM LOCATION:

Primary system—Office of the Controller, NRC, 4922 Fairmont Avenue, Bethesda, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Part 1 and Part 2, and at the NIH computer facility, Bethesda, Maryland.

**Categories of individuals covered by the system:** NRC employees, prospective NRC employees, consultants, and invitational travelers for NRC programs.

**Categories of records in the system:** These records contain Request and Authorization for Official Travel forms, Travel Advance Worksheet, Travel Vouchers and Vouchers for Professional Services, Travel and Miscellaneous Expenses from consultants.

**Authority for maintenance of the system:**

a. 31 U.S.C. 21, 22, 24, 49, 54, 66a, and 952 (1976);

b. 5 U.S.C. 5701 (1976);

c. Federal Travel Regulations, Federal Property Management Regulations, Part 101-7.

**Routine uses of records maintained in the system, including categories of users and the purposes of such uses:** Information in these records may be used:

a. For transmittal to the U.S. Treasury for payment;

b. For transmittal to the Department of State or an embassy for passports or visas;

c. For quarterly report to General Services Administration of individuals approved for first class travel; and

d. For any of the routine uses specified in the Prefatory Statement.

**Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:**  
**STORAGE:**

Maintained on paper in file folders, on disks, and on magnetic tape.

### RETRIEVABILITY:

Records are accessed by name, social security account number, authorization number, estimated travel start day, authorization process day, voucher process day, and voucher payment schedule number.

#### SAFEGUARDS:

Maintained in locked file cabinets in same room as users. For ADP records, a key word, initials, and NRC Office of the Controller's account number must be known in order to retrieve information.

**Retention and disposal:** Retained for 3 years, then destroyed through regular trash disposal system.

### System manager(s) and address:

Controller  
Office of the Controller  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

#### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Record access procedures:** Same as "Notification procedure."

**Contesting record procedures:** Same as "Notification procedure."

**Record source categories:** Information is provided by the individual, the organizational component approving the travel, outside transportation agents and rate books for cost information.

NRC-21

**System name:** Payroll Accounting Records—NRC

**System location:** Primary system—Office of the Controller, NRC, Lugenbeel Building, 4922 Fairmont Avenue, Bethesda, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Part 1 and Part 2, and at the Department of Energy Computer Facility, Germantown, Maryland.

**Categories of individuals covered by the system:** NRC employees.

**Categories of records in the system:** Pay, leave, and allowance histories.

**Authority for maintenance of the system:** 31 U.S.C. 21, 22, 24, 49, 54, 66a, and 952 (1976).

**Routine uses of records maintained in the system, including categories of users and the purposes of such uses:** Information in these records may be used:

a. For transmittal of data to U.S. Treasury to effect issuance of paychecks to employees and distribution of pay according to employee directions for savings bonds, allotments, financial institutions, and other authorized purposes;

b. For reporting tax withholding to Internal Revenue Service and appropriate state and local taxing authorities;

c. For FICA deductions to the Social Security Administration;

d. For dues deductions to labor unions;

e. For withholdings for health insurance to the insurance carriers and the Office of Personnel Management;

f. For charity contribution deductions to agents of charitable institutions;

g. For annual W-2 statements to taxing authorities and the individual;

h. (When P.L. 93-579 becomes effective, it is anticipated that appropriate statements will be issued to employees, spouse-recipients, and the courts involved);

i. For transmittal to the Office of Management and Budget for review of budget requests;

j. For transmittal of data to the Department of Energy for preparing computer material for NRC's transmittal of data to the U.S. Treasury;

k. For withholding and reporting of retirement, reemployed annuitants and life insurance information to the Office of Personnel Management;

l. For transmittal of information to State agencies for unemployment purposes; and

m. For any of the routine uses specified in the Prefatory Statement.

**Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:**

#### STORAGE:

File folders, microfiche, magnetic tapes, and disks.

#### RETRIEVABILITY:

**ACCESSED BY NAME AND SOCIAL SECURITY NUMBER.**



## SYSTEMS OF RECORDS

### SAFEGUARDS

File folders, microfiche, tapes, and disks, including backup data, are maintained in locked cabinets in secured locked rooms after working hours. Access to and use of these records are limited to those persons whose official duties require such access.

### RETENTION AND DISPOSAL:

File folders are retained for four years after transfer or separation of an employee, then destroyed by shredding. ADP information is retained on disks for one year, transferred to and retained on magnetic tape for three years; then the tape is erased.

### System manager(s) and address:

Controller, Office of the Controller  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Record access procedures: Same as "Notification procedure."

Contesting record procedures: Same as "Notification procedure."

Record source categories: Information is provided by the individual and the Division of Organization and Personnel.

### NRC-22

System name: Personnel Performance Appraisals-NRC

### SYSTEM LOCATION:

Division of Organization and Personnel, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

Categories of individuals covered by the system: NRC employees, including candidates who apply for job vacancies under the NRC vacancy announcement system.

Categories of records in the system: This system of records contains evaluations of applicants and employees, evaluation criteria and methods, employee placement follow-up interview reports, appraisals from other individuals who are knowledgeable of the applicant's abilities, supervisory appraisals of performance and

career development potential, and other related records.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

Section 161(d), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201(d) (1976).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used:

- By the Office of Personnel Management and Merit Systems Protection Board to resolve grievances or complaints related to promotion or appointment selections; and
- For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

### STORAGE:

Maintained on paper in file folders.

Retrievability: Records are accessed by name.

### SAFEGUARDS:

Maintained in locked file cabinets. Access to and use of these records are limited to those persons whose official duties require such access.

### RETENTION AND DISPOSAL:

Retained 1 year, or until subsequent rating is prepared, whichever is later, then destroyed by shredding.

### System manager(s) and address:

Chief, Personnel Operations Branch  
Division of Organization and Personnel  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Record access procedures: Same as "Notification procedure."

Contesting record procedures: Same as "Notification procedure."

### RECORD SOURCE CATEGORIES:

Individual to whom record pertains and employee's supervisors.

### NRC-23

System name: Personnel Research and Test Validation Records-NRC

Pursuant to 5 U.S.C. 552a(k)(6), the Commission has exempted portions of

this system of records from 5 U.S.C. 552a (c)(3), (d), (e)(1), (e)(4)(G), (H) and (I) and (f). The exemption rule is contained in Section 9.95 of the NRC regulation (10 CFR 9.95).

### SYSTEM LOCATION:

Primary system-Division of Organization and Personnel, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

Duplicate system-duplicate systems exist, in whole or in part, at the Department of Energy computer facility, Germantown, Maryland.

Categories of individuals covered by the system: NRC employees and applicants for NRC employment

Categories of records in the system: These records include education and employment history, test scores, responses to test items and questionnaires, interview data and ratings of supervisors regarding the individuals to whom the records pertain. Data are collected on a project basis and are used for the construction, analysis and validation of written tests; for research on personnel measurement and selection methods and techniques and research on personnel management practices such as performance evaluation or productivity.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

a. Section 161(d), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201(d) (1976);

b. 44 U.S.C. 3101 (1970).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used:

- To exchange between the NRC, Office of Personnel Management and Merit Systems Protection Board, and other Federal agencies for personnel research purposes and used to aid in identifying employees included in research studies that extend over a period of time; and
- For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

Storage: Records are maintained in file folders, on punched cards, computer tape, and computer storage.

Retrievability: Records are maintained by project. Personnel information can be retrieved by name or personal identifier



## SYSTEMS OF RECORDS

**Safeguards:** Records are kept in locked files and access is limited to staff.

### **RETENTION AND DISPOSAL:**

Retained 3 years, then destroyed by shredding.

**System manager(s) and address:**

Chief, Management and Policy Branch  
Division of Organization and Personnel  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Notification procedures:**

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Record access procedures:** Same as "Notification procedure." Some records contain information received in confidence and will not be disclosed to the extent that disclosure would reveal a confidential source. Testing material may not be disclosed to the extent such disclosure would compromise the testing process.

**Contesting record procedures:** Same as "Notification procedure."

### **RECORD SOURCE CATEGORIES:**

Individual Federal employees or applicants, supervisors, assessment center assessors, Office of Personnel Management, or NRC personnel files and records, and other Federal agencies.

## **NRC-24**

**System name:**

Property and Supply System  
(PASS)—NRC

**System location:**

Property Management Section,  
Property and Supply Branch, Division  
of Facilities and Operations Support,  
NRC, 4922 Fairmont Avenue, Bethesda,  
Maryland.

**Categories of individuals covered by the system:**

NRC employees, consultants, and contractors who have custody of items of personal property, including major items of equipment (e.g. office furnishings, automobiles, etc.) and items of sensitive property (e.g., cameras, portable calculators, and cassette recorders).

**Categories of records in the system:**

These records contain information about the equipment (type, make, model, serial number, etc.); and information about the custodians of the equipment (name, office, and office location).

**Authority for maintenance of the system:**

a. The Federal Property and Administrative Services Act of 1949, as amended, 40 U.S.C. 483 (b) and (c) (1976).

b. 31 U.S.C. 65a(a)(3) (1976).

c. 40 U.S.C. 487(a) (1976).

**Routine uses of records maintained in the system, including categories of users and the purposes of such uses:**

Information in these records may be used:

a. To provide information to maintain inventory of equipment;

b. To provide information for clearances of employees who separate from the NRC;

c. For any of the routine uses specified in the Prefatory Statement.

**Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:**

**Storage:**

Maintained on NRC forms and magnetic tape systems, with history and audit files.

**Retrievability:**

Accessed by name, office, or office location.

**Safeguards:**

Doors are alarmed during non-working hours. Access to and use of these records are limited to those persons whose official duties require such access.

**Retention and disposal:**

Retained for three years after an individual's responsibility for the assigned equipment terminates; destroyed by regular trash disposal system or deleted from the data bank.

**System manager and address:**

Chief, Property and Supply Branch,  
Division of Facilities and Operations  
Support, Office of Administration,  
United States Nuclear Regulatory  
Commission, Washington, D.C. 20555.

**Notification procedure:**

Office of Administration, United  
States Nuclear Regulatory Commission,  
Washington, D.C. 20555.

**Record access procedures:**

Same as "Notification procedure."

**Contesting record procedures:**

Same as "Notification procedure."

**Record source categories:**

Information in this system of records comes from NRC forms signed by the individuals having custody of the items, or from reports and memoranda received by the Division of Facilities and Operations Support.

## SYSTEMS OF RECORDS

### NRC 25

#### SYSTEM NAME:

Oral History Program—NRC

#### SYSTEM LOCATION:

Office of the Secretary of the Commission, NRC, 1717 H Street, NW, Washington, DC.

#### CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

NRC employees, former employees, and other individuals who volunteer to be interviewed for purpose of providing information for a history of the nuclear regulatory program.

#### CATEGORIES OF RECORDS IN THE SYSTEM:

Records consist of interviews on magnetic tape, and transcribed scripts of the interviews.

#### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

- a. Energy Reorganization Act of 1974, Title II, Sections 201(a)(1) and 201(a)(2)
- b. Section 141b, Atomic Energy Act of 1954, as amended, 42 U.S.C. 2161b.

#### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used:

- a. For incorporation in a future publication on the history of the nuclear regulatory program;
- b. To provide information to historians and other researchers.

#### POLICIES AND PRACTICES FOR STORING, RETRIEVING, ACCESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:

##### STORAGE:

Maintained on magnetic tape and typescripts.

##### RETRIEVABILITY:

Information is accessed by the name of the interviewee.

##### SAFEGUARDS:

Maintained in locked file cabinet. Access to and use of these records are limited to those authorized by the Historian or a designee.

##### RETENTION AND DISPOSAL:

Typescripts are retained indefinitely. Tapes are normally retained until they are transcribed; some may be retained indefinitely.

##### SYSTEM MANAGER(S) AND ADDRESS:

NRC Historian Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

#### RECORD ACCESS PROCEDURES:

Same as "Notification procedure."

#### CONTESTING RECORD PROCEDURES:

Same as "Notification procedure."

#### RECORD SOURCE CATEGORIES:

Information in this system of records is obtained from interviews granted on a voluntary basis to the Historian and his/her staff.

### NRC-26

Incorporated in NRC 29

### NRC-27

System name: Radiation Exposure Information and Reports System (REIRS) Files—NRC

#### SYSTEM LOCATION:

Primary system—Union Carbide Corporation, Industrial and Personnel Management Department, Computer Science Division, P.O. Box P, Oak Ridge, Tennessee 37830.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Part 1 (e) and Part 2.

#### CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Individuals monitored for radiation exposure while employed by or visiting or temporarily assigned to certain NRC licensed facilities; individuals who were exposed to radiation or radioactive materials in incidents required to be reported pursuant to 10 CFR 20.403 and 20.405 by all NRC licensees; individuals who may have been exposed to radiation or radioactive materials off-site from a facility, plant, installation, or other place of use of licensed materials, or in unrestricted areas, as a result of an incident involving byproduct, source, or special nuclear material; as then required by NAVMED P-6055, Radiation Health Protection Manual, monitored individuals terminating their service with the Navy prior to 1977; and monitored employees of all the registrants of the State of Illinois.

#### CATEGORIES OF RECORDS IN THE SYSTEM:

These records contain information relating to individual's name; sex; social security account number; date of birth; job category; period of employment; place and period date of exposure; name, address, and license number of individual's employer; licensee name and number reporting the incident; radiation doses or estimates of exposure received during this period; types of

radiation; part(s) or organ(s) exposed; and nuclide(s) involved. Some reports will indicate whether the individual is a contractor or a utility employee. Between January 1972 and May 1974 the following information was also recorded for individuals over-exposed to radiation: sex, training experience, regular occupation of the exposed individuals; device or method used to determine dose(s); brief statement describing the incident and the causes; corrective actions taken; status of exposed individual (i.e., medical treatment); type, age, and manufacturer of malfunctioning equipment; and cumulative dose prior to incident.

## SYSTEMS OF RECORDS

**Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:**

**Storage:** Records are computerized and maintained on magnetic tape, maintained in log books, and filed as either a computer printout or original paper document.

**Retrievability:** Records are accessed by individual name, social security account number, and by licensee name or number.

**Safeguards:** Information maintained at the Computing Technology Center is accessible only to the programmers assigned to the REIRS system and released only to the Division of Technical Review. Reports kept by the Division of Technical Review are in file cabinets and bookcases in a secured building. A log is maintained of both telephone and written requests for information.

### **Retention and disposal:**

- a. Original paper document-retained 2 years; destroyed by shredding;
- b. Magnetic tape-retained permanently at Computing Technology Center;
- c. Log books-retained indefinitely; no names;
- d. Computer printouts-periodically updated; destroyed through regular trash disposal system.

### **SYSTEM MANAGER(S) AND ADDRESS:**

Branch Chief  
Performance Evaluation Branch  
Office of Management and Program Analysis  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### **Notification procedure:**

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Record access procedures:** Same as "Notification procedure"

**Contesting record procedures:** Same as "Notification procedure."

**Record source categories:** Information in this system of records either comes from the monitored worker, visitors, worker's employer, or the person in charge of the facility to which the worker has been assigned

### **NRC-28**

**System name:** Recruiting, Examining and Placement Records-NRC

Pursuant to 5 U.S.C. 552a(k)(5), the Commission has exempted portions of

this system of records from 5 U.S.C. 552a(c)(3), (d), (e)(1), (e)(4)(G), (H) and (I) and (f). The exemption rule is contained in Section 9.95 of the NRC regulation (10 CFR 9.95).

### **SYSTEM LOCATION:**

Primary system-Division of Organization and Personnel, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

Duplicate system-duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Part 1 and Part 2, and at the Department of Energy computer facility, Germantown, Maryland.

### **CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:**

Persons who have applied for Federal employment with the U.S. Nuclear Regulatory Commission.

### **CATEGORIES OF RECORDS IN THE SYSTEM:**

These records contain general application information relating to the education, training, employment, history, earnings, past performance, criminal convictions, if any, written achievement tests, potential, honors, awards, or fellowships, military service, veteran preference status, birthplace, birth date, social security account number, and home address of persons who have applied for Federal employment with the NRC (SF-171, resumes, and similar documents).

**Authority for maintenance of the system:** Section 161(d), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201(d) (1976).

**Routine uses of records maintained in the system, including categories of users and the purposes of such uses:** Information in these records may be used:

- a. To furnish information to agencies relative to transfer or consideration of employment; and
- b. For any of the routine uses specified in the Prefatory Statement.

**Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:**

**Storage:** Records are maintained primarily on forms, lists and index cards in file folders. Also, certain data is maintained on magnetic tapes, disks and punch cards.

**Retrievability:** Records are indexed by name and an identification number assigned to each individual.

### **SAFEGUARDS:**

Maintained in unlocked file cabinet. Access to and use of these records are

### **AUTHORITY FOR MAINTENANCE OF THE SYSTEM:**

Sections 53, 63, 65, 81, 103, 104, and 161(o), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2073, 2093, 2095, 2111, 2133, 2134, and 2201(o) (1976).

### **ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:**

Information in these records may be used:

- a. To provide data to other Federal and state agencies involved in monitoring and/or evaluating radiation exposure received by individuals as enumerated in the paragraph "Categories of individuals covered by the system;" and
- b. For any of the routine uses specified in the Prefatory Statement.

## SYSTEMS OF RECORDS

NRC - 29

limited to those persons whose official duties require such access.

### Retention and disposal:

a. Register of Eligible Applications—retained for one year or until no longer needed, then destroyed.

b. Index Cards—destroyed when no longer needed.

c. Other related recruitment and placement documents—destroyed when no longer needed.

### System manager(s) and address:

Chief, Recruitment Branch  
Division of Organization and Personnel  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Record access procedures:** Same as "Notification procedure." Some information was received in confidence and will not be disclosed to the extent that disclosure would reveal a confidential source.

**Contesting record procedures:** Same as "Notification procedure."

**Record source categories:** Information in this system of records either comes from the individual to whom it applies or is derived from information supplied by that individual, with the exception of reports from medical personnel on physical qualifications, results of examinations, vouchers filled out by references and educational institutions whose names were supplied by applicant, and information from other Federal agencies.

### SYSTEM NAME:

Document Control System—NRC-29.  
Pursuant to 5 U.S.C. 552a(k), the Commission has exempted portions of this system of records from 5 U.S.C. 552a(c)(3), (e)(1), (e)(4)(G), (H), (I), and (f). This exemption rule is contained in section 9.95 of the NRC regulation (10 CFR 9.95).

### SYSTEM LOCATION:

Primary system—Division of Technical Information and Document Control, Office of Administration, U.S. Nuclear Regulatory Commission, 7920 Norfolk Avenue, Bethesda, Maryland.  
Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Parts 1 and 2 of the NRC Notice of Systems of Records; the NRC Public Document Room, 1717 H Street, NW., Washington, D.C.; the NRC Local Public Document Rooms (LPDR's); and the TERA Advanced Services Corporation, 7101 Wisconsin Avenue, Suite 1400, Bethesda, Maryland.

### CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

NRC staff, contractors, and sub-contractors, licensees, congressional offices, and other correspondents with the NRC staff.

### CATEGORIES OF RECORDS IN THE SYSTEM:

Documents both received by and originated by the NRC.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

- a. 44 U.S.C. 3101.
- b. Sec. 201, Energy Reorganization Act of 1974, U.S.C. 5841.

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

- a. To refer, where appropriate, inquiries to Federal agencies or persons for their reply or action;
- b. To provide information to persons or agencies requesting this information, including provision of Daily Accession Lists in the NRC Public Document Room and Local Public Document Rooms;
- c. To prepare a monthly "Title List of Documents Made Publicly Available," and
- d. For any of the routine uses specified in the Prefatory Statement.

### POLICIES AND PRACTICES FOR STORING, RETRIEVING, ACCESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:

### STORAGE:

Maintained on microfiche, disks, tapes, and paper in file folders. Classified documents are maintained in locked safes; proprietary and sensitive safeguards documents are maintained in secured facilities.

### RETRIEVABILITY:

Accessed by name (author and recipient), corporate source, subject matter, or other identifying document or control number.

### SAFEGUARDS:

Access to and use of these records are limited to those persons whose official duties require such access. Information not exempt from disclosure under the Freedom of Information Act (FOIA) will be publicly available in the PDR's and LPDR's.

### RETENTION AND DISPOSAL:

Retained and destroyed in accordance with approved records disposal schedules for the various types of records involved.

### SYSTEM MANAGER(S) AND ADDRESS:

Director, Division of Technical Information and Document Control, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

### NOTIFICATION PROCEDURE:

Director, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

### RECORD ACCESS PROCEDURES:

Same as "Notification procedure." Information which is classified or otherwise exempt from public disclosure under the FOIA and will not be disclosed.

### CONTESTING RECORD PROCEDURES:

Same as "Notification procedure."

### RECORD SOURCE CATEGORIES:

Information in this system of records comes from the correspondence to and from the NRC staff, contractors, and NRC staff employees.

## SYSTEMS OF RECORDS

NRC-30

### SYSTEM NAME:

Manpower System (MPS) Records-NRC

### SYSTEM LOCATION:

Primary system-NIH computer facility, c/o Office of Management and Program Analysis, NRC, 7735 Old Georgetown Road, Bethesda, Maryland.

Duplicate system-duplicate systems exist, in whole or in part, at the location listed in Addendum I, Part 1 (a).

Categories of individuals covered by the system: All NRC employees.

### CATEGORIES OF RECORDS IN THE SYSTEM:

These records contain information relating to number of regular and nonregular hours worked, the nature of the work, and workload projections.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

a. Section 161(p), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201(p) (1976);

b. E.O. 9397, November 22, 1943.

Routine uses of records maintained in the system, including categories of users and the purposes of such uses:

A record in the system of records may be disclosed for the routine use specified in paragraph number 5 of the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

### STORAGE:

Maintained in computer files, on tapes, disks, cards, and microfiche.

### RETRIEVABILITY:

Accessed by social security account, project, program, or activity number, docket number, TACS, or PPSAS numbers.

### SAFEGUARDS:

Maintained in locked cabinets in locked rooms. Access to and use of these records are limited to those persons whose official duties require such access.

### RETENTION AND DISPOSAL:

Retained 2 years, then destroyed through regular trash disposal system.

### SYSTEM MANAGER(S) AND ADDRESS:

a. Director, Office of Management and Program Analysis, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

b. Assistant to the Director and Chief, Program Support Branch Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Record access procedures: Same as "Notification procedure."

Contesting record procedures: Same as "Notification procedure."

Record source categories: Information in this system of records comes from the individual to whom it pertains.

NRC-31

### SYSTEM NAME:

Correspondence and Records Branch, Office of the Secretary, NRC.

### SYSTEM LOCATION:

Office of the Secretary,  
Correspondence and Records Branch,  
NRC, 1717 H Street, N.W., Washington, DC 20555.

### CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

The majority of records in this system consist of internal NRC memoranda between NRC employees and the Chairman, a Commissioner, or the Secretary in the ordinary course of carrying out the official business of the NRC. Records also include correspondence from Members of Congress and their staffs including constituent referrals, and White House correspondence referred to the NRC for response. Correspondence may identify an individual's social security number, date of birth, address, and employment.

### CATEGORIES OF RECORDS IN THE SYSTEM:

These records contain information concerning all subjects which directly or indirectly relate to the fulfillment of NRC's statutory mandate. Records include information dealing with the policy, legal, administrative, and adjudicatory functions of the NRC.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

a. Section 201, Energy Reorganization Act of 1974, 42 U.S.C. 5841 91976);

b. 44 U.S.C. 3101 (1970).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

The records may be used for any of the routine uses specified in the Prefatory Statement.

### POLICIES AND PRACTICES FOR STORING, RETRIEVING, ACCESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:

### STORAGE:

Records are maintained in file folders.

### RETRIEVABILITY:

Most records are accessed by subject matter headings and are not individually identifiable. Access to some correspondence by individual name is available through correspondence control documents.

### SAFEGUARDS:

Access to and use of these records are limited to those persons whose official duties require such access. Classified materials are maintained in approved safes, and unclassified records are maintained in rolling file equipment. Access to floor where records are held is controlled 24 hours per day by Federal Protective Officers.

### RETENTION AND DISPOSAL:

Retained indefinitely.

### SYSTEM MANAGER (S) AND ADDRESS:

Chief, Correspondence and Records Branch, Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### RECORD ACCESS PROCEDURES:

Same as "Notification procedure." Some information is classified pursuant to Executive Order 12065 and will not be disclosed.

Contesting record procedures: Same as "Notification procedure."

Record source categories: Information in this system of records comes from communications to the Commission and responses thereto.

### SYSTEMS EXEMPTED FROM CERTAIN PROVISIONS OF THE ACT:

Pursuant to 5 U.S.C. 552a(k)(1), the Commission has exempted portions of the system of records from 5 U.S.C. 552a(c)(3), (d), (e)(1), (e)(4)(G), (H) and (I), and (f). The exemption rule is contained in Section 9.95 of the NRC regulations (10 CFR 9.95).



## SYSTEMS OF RECORDS

c. Dates of license issuance and expiration; and

d. Geographic location of licensees by state and town.

**Authority for maintenance of the system:**

a. Sections 53, 63, 65, 161(b), (i) and (o), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2073, 2093, 2095, 2201(b), (i) and (o) (1976).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used:

a. To provide records to State health departments for their information and use;

b. To provide information to other Federal, State, and local health officials in the event of incident or exposure, for purposes of their information, investigation, and protection of public health and safety;

c. To provide the Department of Energy with information concerning special nuclear material licenses for purposes of control related transfers and safeguards accountability; and

d. For any of the routine uses specified in the Prefatory Statement;

e. Certain of the information provided in this category is routinely placed in the NRC Public Document Room.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

### STORAGE:

Maintained on paper, index cards, logs, microfilm, and mag cards.

**Retrievability:** Indexed by applicant and licensee name in juxtaposition with assigned license number.

### SAFEGUARDS:

Maintained in unlocked shelving units under control of supervisory personnel. Access to and use of these records are limited to those persons whose official duties require such access.

### RETENTION AND DISPOSAL:

Records are continuously computer updated as new information is developed or individual licenses are cancelled or terminated; license files are transferred annually to the NRC warehouse when they become inactive or are terminated, and retained indefinitely.

**System manager(s) and address:**

Director  
Division of Fuel Cycle and Material Safety  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Record access procedures:** Same as "Notification procedure."

**Contesting record procedures:** Same as "Notification procedure."

**Record source categories:** Forms and information submitted by applicants and licensees; information developed by NRC personnel from such forms and information.

NRC-32

### SYSTEM NAME:

Source and Special Nuclear Material License Records—NRC.

### SYSTEM LOCATION:

Primary system—Division of Fuel Cycle & Material Safety, Office of Nuclear Material Safety and Safeguards, NRC, 7915 Eastern Avenue, Silver Spring, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Part 1 (b), Part 2, and the NIH computer facility, Bethesda, Maryland.

**Categories of individuals covered by the system:** Applicants for and licensees under Source and Special Nuclear Materials licensing programs.

**Categories of records in the system:** Information contained in this system reflects data supplied by applicants and licensees and developed by the NRC staff in the license review and authorization process with respect to the possession and use of source and special nuclear material. System component records developed and maintained by the NRC staff also include summary and cross-indexing type data promoting quick access to and breakout of such license information as:

a. Alphabetical listings of active and inactive licenses and applicants for licenses arranged by state and by a master listing;

b. Cross indexes of names to assigned license numbers;

NRC-33

### SYSTEM NAME:

Special Inquiry File

### SYSTEM LOCATION:

a. Primary system: Special Inquiry Group, U.S. Nuclear Regulatory Commission, 7920 Norfolk Avenue, Bethesda, Maryland.

b. Duplicate system: A duplicate system exists, in whole or in part, at the TERA Advanced Services Corporation, 7101 Wisconsin Avenue, Suite 1400, Bethesda, Maryland.

### CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Individuals possessing information regarding or having knowledge of matters of potential or actual concern to the Commission in connection with the investigation of an accident or incident at a nuclear power plant or other nuclear facility, or an incident involving nuclear materials.

### CATEGORIES OF RECORDS IN THE SYSTEM:

The system consists of an alphabetical index file bearing individual names. The index provides access to associated records which are arranged by subject matter, title, or identifying number(s) and/or letter(s). The system incorporates the records of all Commission correspondence, memoranda, audit reports and data, interviews, questionnaires, legal papers, exhibits, investigative reports and data, and other material relating to or developed as a result of the inquiry, study, or investigation of an accident or incident.

## SYSTEMS OF RECORDS

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

a. Sections 161(c), (i), and (o) of the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201(c), (i) and (o). b. Section 201 (f), Energy Reorganization Act of 1974, 42 U.S.C. 5841(f).

### ROUTINE USES OF RECORDS IN THE SYSTEM INCLUDING CATEGORIES OF USERS AND THE PURPOSE OF SUCH USES:

a. A record in this system of records relating to an item which has been referred to the Commission or Special Inquiry Group for investigation by an agency, group, organization, or individual may be disclosed as a routine use to notify the referring agency, group, organization, or individual of the status of the matter or of any decision or determination that has been made.

b. A record in this system of records may be disclosed as a routine use to a foreign country pursuant to an international treaty or convention entered into and ratified by the United States.

c. A record in this system of records relating to the integrity and efficiency of the Commission's operations and management may be disseminated outside the Commission as part of the Commission's responsibility to inform the Congress and the public about Commission operations.

d. A record in this system of records may be disclosed for any of the routine uses specified in paragraph numbers 1, 2, 4, 5, and 6 of the Prefatory Statement.

### POLICIES AND PRACTICES FOR STORING, RETRIEVING, ACCESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:

#### STORAGE:

Maintained in microfiche, disks, tapes, and paper in file folders. Documents are maintained in secured vault facilities.

#### RETRIEVABILITY:

Accessed by name (author or recipient), corporate source, title of document, subject matter, or other identifying document or control number.

#### SAFEGUARDS:

These records are located in lockable metal filing cabinets or safes in a secured facility and are available only to authorized personnel whose duties require access.

#### RETENTION AND DISPOSAL:

Retained and destroyed in accordance with approved records disposal schedules for the various types of records involved.

### SYSTEM MANAGER(S) AND ADDRESS:

Records Manager, Special Inquiry Group, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

### NOTIFICATION PROCEDURE:

Director, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

### RECORD ACCESS PROCEDURES:

Same as "Notification procedure". Information classified pursuant to Executive Order 12065 will not be disclosed. Information received in confidence will not be disclosed to the extent that disclosure would reveal a confidential source.

### CONTESTING RECORD PROCEDURES:

Same as "Notification procedures".

### RECORD SOURCE CATEGORIES:

The information in this system of records is obtained from sources including, but not limited to, U.S. Nuclear Regulatory Commission officers and employees, Federal, State, local, and foreign agencies, NRC licensees, nuclear reactor vendors and architectural engineering firms, other organizations or persons knowledgeable about the incident or activity under investigation, and relevant NRC records.

### SYSTEMS EXEMPTED FROM CERTAIN PROVISIONS OF THE ACT:

Pursuant to 5 U.S.C. 552a (k)(1), (k)(2), and (k)(5), the Commission has exempted portions of this system of records from 5 U.S.C. 552a (c)(3), (d), (e)(1), (e)(4)(G), (H), (I), and (f). The exemption rule is contained in section 9.95 of the NRC regulations (10 CFR 9.95).

### NRC-34

#### SYSTEM NAME:

Advisory Committee on Reactor Safeguards (ACRS) Correspondence Index and Associated Records—NRC

#### SYSTEM LOCATION:

Primary system—Advisory Committee on Reactor Safeguards, NRC, 1717 H Street, NW, Washington, D.C.

Duplicate system—duplicate systems exist, in whole or in part, at the NIH computer facility, Bethesda, Maryland.

Categories of individuals covered by the system: Persons providing information to or requesting information from the ACRS.

Categories of records in the system: These records contain information relating to incoming requests and correspondence from individuals and replies

thereto and a listing by authors names of technical information.

Authority for maintenance of the system: 44 U.S.C. (1970).

Routine uses of records maintained in the system, including categories of users and the purposes of such uses: For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

Storage: Indexing is maintained on computer tapes and disks and individual materials are located in ACRS files.

the Key Word Out of Context (KWOC) index and issuing organization or agency.

Safeguards: Access is limited to those persons whose official duties require such access.

#### RETENTION AND DISPOSAL:

Retained indefinitely.

### SYSTEM MANAGER(S) AND ADDRESS:

Chief, Technical Information Branch, Advisory Committee on Reactor Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

#### Notification procedures:

Director, Office of Administration

U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Record access procedures: Same as "Notification procedure."

Contesting record procedures: Same as "Notification procedure."

Record source categories: Records contain information prepared by private individuals or organizations, government agencies and their contractors, companies, and other groups such as the American National Standards Institute (ANSI).

## SYSTEMS OF RECORDS

NRC-35

### SYSTEM NAME:

IE Household Move Survey.

### SYSTEM LOCATION:

Executive Office of Management and Analysis, Office of Inspection and Enforcement, NRC, East West Towers Building, 4350 East West Highway, Bethesda, Md.

### CATEGORIES OF RECORDS IN THE SYSTEM:

Records consist of questionnaires filled out by employees who change duty stations. The questionnaire includes employee name, date of household move, location of move, actual costs of move, and amount of reimbursements received from the Government.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

Section 161c of the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201(d).

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

A record in this system of records may be disclosed as a routine use to persons in federal agencies involved in establishing, monitoring, or maintaining records on expenditures and reimbursements of travel and/or household moves by government employees.

### POLICIES AND PRACTICES FOR STORING, RETRIEVING, ASSESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:

#### STORAGE:

Maintained in file folder.

#### RETRIEVABILITY:

Information is accessed by employee name.

#### SAFEGUARDS:

Records are maintained in lockable metal filing cabinet.

Access to them is available only to persons authorized by the system manager.

#### RETENTION AND DISPOSAL:

Records will be maintained for one year after the survey is completed, but in any case they will be destroyed within three years after they have been received.

#### SYSTEM MANAGER(S) AND ADDRESS:

Executive Officer for Management and Analysis, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

#### NOTIFICATION PROCEDURE:

Director, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

### CONTESTING RECORD PROCEDURE:

Same as "Notification Procedures".

### RECORD SOURCE CATEGORIES:

The information in this system of records is obtained from questionnaires or surveys filled out by employees who have moved in connection with changes of duty station. All information is provided on a voluntary basis.

NRC-36

System name: Employee Locator Records Files—NRC

### SYSTEM LOCATION:

Primary system—Telecommunications Branch, Division of Facilities and Operations Support, Office of Administration, NRC, 7920 Norfolk Avenue, Bethesda, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Parts 1 and 2.

### CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

NRC employees and consultants.

#### Categories of records in the system:

These records contain information relating to name, address (home and business), telephone numbers (home and business), organization, persons to be notified in case of emergency and other related records.

Authority for maintenance of the system: 44 U.S.C. 3101 (1970).

Routine uses of records maintained in the system, including categories of users and the purposes of such uses: For the routine use specified in paragraph number 6 of the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

### STORAGE:

Maintained on index cards.

Retrievability: Indexed by name.

### SAFEGUARDS:

Maintained in controlled access room under 24-hour visual control of NRC operators. Access to and use of these records are limited to those persons whose official duties require such access.

### RETENTION AND DISPOSAL:

Retained until 6 months after association with NRC is discontinued, then destroyed by shredding.

### SYSTEM MANAGER(S) AND ADDRESS:

Chief, Telecommunications Branch, Division of Facilities and Operations Support, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

#### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Record access procedures: Same as "Notification procedure."

Contesting record procedures: Same as "Notification procedure."

Record source categories: Individual on whom the record is maintained, general personnel records, and other related records.

NRC-37

System name: Information Security Files and Associated Records—NRC

Pursuant to 5 U.S.C. 552a(k)(1) and (5), the Commission has exempted portions of this system of records from 5 U.S.C. 552a(c)(3), (d), (e)(1), (e)(4)(G), (H) and (I) and (f). The exemption rule is contained in Section 9.95 of NRC regulations in 10 CFR Part 9.

### SYSTEM LOCATION:

Primary system—Division of Security, Office of Administration, NRC, 7915 Eastern Avenue, Silver Spring, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Parts 1 and 2, and at the NIH computer facility, Bethesda, Maryland.

Categories of individuals covered by the system: Persons including present or former NRC employees, NRC contractors, NRC consultants, licensees,

## SYSTEMS OF RECORDS

other government agency personnel, and other cleared persons.

**Categories of records in the system:** These records include information regarding:

a. personnel who are authorized access to specified levels, categories and types of information, the approving authority, and related documents.

b. individuals who originate classified documents as well as identifying information about the document.

### **AUTHORITY FOR MAINTENANCE OF THE SYSTEM:**

a. Sections 145 and 161(i), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2165 and 2201(i)(1976);

b. E.O. 12065, June 28, 1978.

### **ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:**

Information in this system may be used:

a. To provide information relating to the control of classified information and material to the Information Security Oversight Office, Department of Defense, Department of Energy (computer input) and other government agencies; and

b. For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

### **STORAGE:**

Maintained primarily in file folders, on magnetic tape, disk packs, and index cards.

### **RETRIEVABILITY:**

Indexed and accessible by name and/or assigned number.

**Safeguards:** Maintained in locked buildings, containers, or security areas under guard and/or alarm protection, as appropriate.

### **RETENTION AND DISPOSAL:**

a. Classified documents, administrative correspondence, document receipts, destruction certificates, classified document inventories, and related records—retained 2 years, then destroyed by shredding.

b. Top Secret Accounting and Control files—registers: retained 5 years after documents shown on form are downgraded, transferred, or destroyed; accompanying forms: retained until related document is downgraded, transferred, or destroyed. Destroyed by shredding.

### **System manager(s) and address:**

Director, Division of Security  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### **Notification procedure:**

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### **RECORD ACCESS PROCEDURES:**

Same as "Notification procedure." Some information is classified pursuant to Executive Order 12065 and will not be disclosed. Other information has been received in confidence and will not be disclosed to the extent that disclosure would reveal a confidential source.

**Contesting record procedures:** Same as "Notification procedure."

### **RECORD SOURCE CATEGORIES:**

Persons including NRC employees, NRC contractors, NRC consultants, and NRC licensees as well as information furnished by other government agencies or their contractors.

### **NRC—38**

**System name:** Mailing Lists—NRC

### **SYSTEM LOCATION:**

**Primary system:** Division of Technical Information and Document Control, Office of Administration, NRC, 7920 Norfolk Avenue, Bethesda, Maryland.

**Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Part 1 (a) and (h), and at the TERA computer facility, Bethesda, Maryland.**

**Categories of individuals covered by the system:** Individuals with an interest in receiving information from the NRC.

### **CATEGORIES OF RECORDS IN THE SYSTEM:**

Mailing lists include primarily the individual's name and address. Some lists also include title, occupation, and institutional affiliation.

### **AUTHORITY FOR MAINTENANCE OF THE SYSTEM:**

44 U.S.C. 3101 (1970).

**Routine uses of records maintained in the system, including categories of users and the purposes of such uses:** For the routine use specified in paragraph number 6 of the Prefatory Statement.

**Information in these records may be used:** For distribution of documents to persons and organizations listed on the mailing lists.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

**Storage:** Paper records are maintained in card files, index cards, address plates, magnetic cards, punch cards, cassettes and magnetic tape.

### **RETRIEVABILITY:**

Filed alphabetically by company name and then individual name, where possible.

**Safeguards:** Access to use of these records is limited to those persons whose official duties require such access.

### **RETENTION AND DISPOSAL:**

Documents requesting changes retained 3 months, destroyed through regular trash disposal system; lists retained until cancelled or revised, destroyed through regular trash disposal system.

### **SYSTEM MANAGER(S) AND ADDRESS:**

Director, Division of Technical Information and Document Control, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

### **Notification procedure:**

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

**Record access procedures:** Same as "Notification procedure."

**Contesting record procedures:** Same as "Notification procedure."

### **RECORD SOURCE CATEGORIES:**

NRC licensees and individuals expressing an interest in NRC activities and publications.

### **NRC—39**

**System name:** Personnel Security Files and Associated Records—NRC

Pursuant to 5 U.S.C. 552a(k)(1) and (5), the Commission has exempted portions of this system of records from 5 U.S.C. 552a(c)(3), (d), (e)(1), (e)(4)(G), (H), and (I) and (f). The exemption rule is contained in Section 9.95 of the NRC regulations in 10 CFR Part 9.

### **SYSTEM LOCATION:**

**Primary system—**Division of Security, Office of Administration, NRC, 7915 Eastern Avenue, Silver Spring, Maryland.

**Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Part 1(e) and Part 2, the Department of Energy, Administration and Century XXI Buildings, Germantown, Maryland and the NIH computer facility, Bethesda, Maryland.**



## SYSTEMS OF RECORDS

**Categories of individuals covered by the system:** Persons including NRC employees and employment applicants, NRC consultants, NRC contractors, licensees, other government agency personnel (e.g., General Services Administration personnel), other persons who have been considered for a personnel clearance, aliens who visit at NRC's facilities and actual or suspected violators of laws administered by NRC.

### CATEGORIES OF RECORDS IN THE SYSTEM:

Include information relating to personnel, including name, address, date and place of birth, social security account number, citizenship, residence history, employment history, foreign travel, education, personal references, organizational membership and security clearance history. These records also contain copies of investigative reports from other agencies (primarily from the Office of Personnel Management or the Federal Bureau of Investigation), summaries of investigative reports, results of Federal agency indices checks reports of personnel security interviews, clearance actions information (e.g., grants and terminations), violations of laws, reports of security infractions, 'Request for Visit or Access Approval' (form NRC-277), and other related personnel security processing documents.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

- a. Sections 145 and 161(i), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2165 and 2201(i) (1976);
- b. E.O. 12065, June 28, 1978;
- c. E.O. 10450, April 27, 1953;
- d. E.O. 10865, February 20, 1960.

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Information in these records may be used by the Division of Security, Personnel Security Board Members or Personnel Security Review Board Members, Office of Personnel Management, Federal Bureau of Investigation, and other Federal agencies:

- a. To determine clearance eligibility;
- b. To certify clearances;
- c. To maintain the NRC personnel security program; and
- d. For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

### STORAGE:

Maintained primarily in file folders, on magnetic tape, disc packs, and index cards.

**Retrievability:** Indexed and accessible by name, social security account number, or case file number of a combination thereof.

### SAFEGUARDS:

File folders and computer printouts are maintained in security or controlled areas under guard and/or alarm protection as appropriate.

### RETENTION AND DISPOSAL:

a. Personnel security clearance files—retained 5 years after date of last action, then transferred to Federal Records Center, Suitland, Maryland; destroyed by shredding 20 years after date of last action.

b. Request for Visit or Access Approval—Maximum security areas: retained 5 years after final entry or after date of document, as appropriate; Other areas: 2 years; destroyed by shredding;

c. Other security clearance administration files—retained 2 years; destroyed by shredding.

### System manager(s) and address:

Director, Division of Security  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### RECORD ACCESS PROCEDURES:

Same as "Notification procedure." Same information is classified pursuant to Executive Order 12065 and will not be disclosed. Other information has been received in confidence and will not be disclosed to the extent that disclosure would reveal a confidential source.

Contesting record procedures: Same as "Notification procedure."

### RECORD SOURCE CATEGORIES:

Persons including NRC applicants, employees, contractors, consultants, licensees, and visitors as well as information furnished by other government agencies or their contractors.

### NRC-40

### SYSTEM NAME:

Facility Security Support Files and Associated Records—NRC.

### SYSTEM LOCATION:

Primary system—Division of Security, Office of Administration, NRC, 7915 Eastern Avenue, Silver Spring, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Part 1 and Part 2.

**Categories of individuals covered by the system:** Persons including present or former NRC employees, NRC consultants, NRC contractors, licensees, other government agency personnel and actual or suspected violators of laws relating to the NRC's activities.

### CATEGORIES OF RECORDS IN THE SYSTEM:

These records include information regarding: NRC facilities' and NRC contractor facilities' security programs and associated records; individuals visiting NRC facilities; NRC employees and NRC related identification files maintained for access purposes; actual or suspected violations of laws of security interest administered by NRC, including copies of investigative reports from other government agencies; records of individual's firearms qualification scores including the accountability of firearms; and other documents relating to the safeguards of National Security Information and Restricted Data.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

- a. Sections 145 and 161 (i), (k), and (p), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2165 and 2201 (i), (k), and (p) (1976);
- b. E.O. 12065, June 28, 1978.

**Routine uses of records maintained in the system, including categories of users and the purposes of such uses:** Information in this system may be used:

- a. To provide licensees and contractors with the information necessary to maintain an adequate security program; and
- b. For any of the routine uses specified in the Prefatory Statement.

Policies and practices for storing, retrieving, accessing, retaining, and disposing of records in the system:

**Storage:** Maintained in file folders and on related forms.

**Retrievability:** Indexed and accessible by name, facility, badge number, identification card number, chronologically, or a combination thereof.

### SAFEGUARDS:

Maintained in security containers or security areas under guard and/or alarm protection, as appropriate.

### RETENTION AND DISPOSAL:

- a. Survey and inspection files and records pertaining to NRC and NRC



## SYSTEMS OF RECORDS

contractor facilities' security programs—Government-owned facilities: retained 3 years, or until discontinuance of facility, whichever is sooner; Privately owned facilities: retained 4 years or until security cognizance is terminated, whichever is sooner; destroyed by shredding;

b. Facility visitor records—Maximum security areas: retained 5 years after final entry or after date of documents, as appropriate; other areas: 2 years; destroyed by shredding;

c. NRC employee and NRC-related identification files—retained 2 years; destroyed by shredding;

d. Security interest violation and investigative report files—retained indefinitely;

e. Firearms qualification scores and accountability—retained 2 years; destroyed by shredding;

f. Other documents relating to NSI and Restricted Data safeguards and other security and protective service files—retained 2 years; destroyed by shredding.

### System manager(s) and address:

Director, Division of Security  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### Notification procedure:

Director, Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

### RECORD ACCESS PROCEDURES:

Same as "Notification procedures."  
Some information is classified pursuant to Executive Order 12065 and will not be disclosed. Other information has been received in confidence and will not be disclosed to the extent that disclosure would reveal a confidential source.

**Contesting record procedures:** Same as "Notification procedure."

**Record source categories:** Persons including NRC employees, NRC contractors, NRC consultants, NRC licensees, and NRC visitors as well as information furnished by other government agencies or their contractors.

## ADDENDUM 1

### LIST OF U.S. NUCLEAR REGULATORY COMMISSION LOCATIONS PART 1

#### NRC headquarters offices

a. Willste Building, 7915 Eastern Avenue, Silver Spring, Maryland

b. East West Towers Building, 4350 East West Highway, Bethesda, Maryland

c. Landow Building, 7910 Woodmont Avenue, Bethesda, Maryland.

d. Lugenbeel Building, 4922 Fairmont Avenue, Bethesda, Maryland

e. Maryland National Bank Building, 7735 Old Georgetown Road, Bethesda, Maryland

f. Phillips Building, 7920 Norfolk Avenue, Bethesda, Maryland

g. Nicholson Lane Building, 5650 Nicholson Lane, Rockville, Maryland.

h. Matomic Building, 1717 H Street, NW, Washington, DC.

## PART 2

### NRC regional offices

a. NRC Region I, 631 Park Avenue, King of Prussia, Pennsylvania 19406

b. NRC Region II, 101 Marietta Street, Suite 3100, Atlanta, Georgia 30303.

c. NRC Region III, 799 Roosevelt Road, Glen Ellyn, Illinois 60137

d. NRC Region IV, 611 Ryan Plaza Drive, Suite 1000, Arlington, Texas 76012

e. NRC Region V, 1990 N. California Boulevard, Suite 202, Walnut Creek, California 94596



UNITED STATES NUCLEAR REGULATORY COMMISSION  
**RULES and REGULATIONS**  
TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS—ENERGY

**COMMISSION NOTICES**

**PROPOSED SYSTEMS OF RECORDS**

45 FR 19104

Published 3/24/80

Comment period expires 4/23/80

**Privacy Act of 1974; Systems of Records; Minor Amendments**

**AGENCY:** United States Nuclear Regulatory Commission (NRC).

**ACTION:** Proposed Minor Amendments of Systems of Records.

**SUMMARY:** The Nuclear Regulatory Commission is proposing minor amendments to the NRC Systems of Records, NRC-19. The amendments clarify and update the information contained in the NRC Systems of Records, necessitated by adding the Senior Executive Service training records to existing NRC training records.

**COMMENT DATE:** Comments are due on or before April 23, 1980.

**ADDRESS:** Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch.

**FOR FURTHER INFORMATION CONTACT:** Sarah N. Wigginton, FOI/PA Branch, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission. Phone: (301) 492-8133.

**SUPPLEMENTARY INFORMATION:** In accordance with the Privacy Act of 1974, the Nuclear Regulatory Commission has published notices of those systems of records maintained by the NRC which contain personal information about individuals and from which such information can be retrieved by an individual identifier. The notices were published as a document subject to publication in the annual compilation of Privacy Act documents.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 552a of Title 5 of the United States Code, as amended, notice is hereby given that adoption of the following amendments to the NRC

System of Records is contemplated. All interested persons who desire to submit written comments or suggestions for consideration in connection with the proposed amendments should send them to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch by April 23, 1980. Copies of comments on the proposed amendments may be examined at the Commission's Public Document Room at 1717 H Street, NW., Washington, DC.

1. The paragraphs of NRC-19 entitled "Categories of individuals covered by the system," "Categories of records in the system," "Authority for maintenance of the system," "Routine uses of records maintained in the system, including categories of uses and the purposes of such uses," "Retention and disposal," and "Record source categories" are amended to read as follows:

**NRC-19**

**SYSTEM NAME:**

Official Personnel Training Records—NRC

**CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:**

Individuals who have applied for or were selected for either NRC or other government/nongovernment training courses or programs, including the NRC Senior Executive Service Candidate Development Program.

**CATEGORIES OF RECORDS IN THE SYSTEM:**

These records contain information relating to the individual's educational background, work experience, performance appraisals, and training courses, including applications for training, training requests, authorizations for training, course grades, evaluations, and other related

personnel information and correspondence.

**AUTHORITY FOR MAINTENANCE OF THE SYSTEM:**

- a. 5 U.S.C. 4103 (1976);
- b. E. O. 11348, April 20, 1967, as amended by E. O. 12107, December 28, 1978;
- c. Civil Service Reform Act of 1978, Pub. L. 95-454 (5 U.S.C. 4311 et seq.);
- d. 5 U.S.C. 3396 (October 13, 1978).

**ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:**

a. Information may be extracted from the records and made available to the Office of Personnel Management; other Federal, state and local government agencies; and educational institutions for use in training programs related to NRC employees.

b. Information in these records may be disclosed for the routine uses specified in paragraph numbers 5 and 6 of the Prefatory Statement.

**RETENTION AND DISPOSAL:**

Retained for 5 years, or until no longer needed, then destroyed by shredding.

**RECORD SOURCE CATEGORIES:**

Information is provided by the individual to whom it applies, the employee's supervisors, and training groups, agencies, or educational institutions.

## PROPOSED SYSTEMS OF RECORDS

Systems into two sections. The additional section will incorporate the new Senior Executive Service into the System and establish a separate System location.

**COMMENT DATE:** Comments are due on or before May 15, 1980.

**ADDRESS:** Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch.

**FOR FURTHER INFORMATION CONTACT:** Sarah N. Wigginton, FOI/PA Branch, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Phone: (301) 492-8133.

**SUPPLEMENTARY INFORMATION:** In accordance with the Privacy Act of 1974, the Nuclear Regulatory Commission has published notices of those systems of records maintained by the NRC which contain personal information about individuals and from which such information can be retrieved by an individual identifier. The notices were published as a document subject to publication in the annual compilation of Privacy Act documents.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 552a of Title 5 of the United States Code, as amended, notice is hereby given that adoption of the following amendments to the NRC System of Records is contemplated. All interested persons who desire to submit written comments or suggestions for consideration in connection with the proposed amendments should send them to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch by May 15, 1980. Copies of comments on the proposed amendments may be examined at the Commission's Public Document Room at 1717 H Street, N.W., Washington, DC.

1. System of Records NRC-22, "Personnel Performance Appraisals—NRC," is amended to read as follows:

### NRC-22

#### SYSTEM NAME:

Personnel Performance Appraisals—NRC: Part A, GG-15 employees and below; Part B, Senior Executive Service and equivalent employees.

#### SYSTEM LOCATION:

Part A: Division of Organization and Personnel, Office of Administration, NRC, 7910 Woodmont Avenue, Bethesda, Maryland.

Part B: Chairman, Performance Review Board, 7735 Old Georgetown

45 FR 25558  
Published 4/15/80  
Comment period expires 5/15/80

### Privacy Act of 1974; Notices of System of Records, Proposed Minor Amendments

**AGENCY:** United States Nuclear Regulatory Commission.

**ACTION:** Proposed Minor Amendments of Systems of Records.

**SUMMARY:** The Nuclear Regulatory Commission is proposing minor amendments to the NRC Systems of Records, NRC-22. The amendments clarify and update the information contained in the NRC Systems of Records, necessitated by the division of the Personnel Performance Appraisals

## PROPOSED SYSTEMS OF RECORDS

Road, Bethesda, Maryland.

Duplicate system—duplicate systems exist, in whole or in part, at the locations listed in Addendum I, Parts 1 and 2.

### CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

NRC employees.

### CATEGORIES OF RECORDS IN THE SYSTEM:

This system of records contains evaluations of employees, evaluation criteria and methods, supervisory appraisals of performance and career development potential, and other related records.

### AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

- a. Section 161(d), Atomic Energy Act of 1954, as amended, 42 U.S.C. 2201(d)(1976);
- b. 5 U.S.C. 4311, et seq.

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

The records may be used for any of the routine uses specified in the Prefatory Statement.

### POLICIES AND PRACTICES FOR STORING, RETRIEVING, ACCESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:

#### STORAGE:

Maintained on paper in the folders.

#### RETRIEVABILITY:

Records are accessed by name.

#### SAFEGUARDS:

Maintained in locked file cabinets. Access to and use of these records are limited to those persons whose official duties require such access.

#### RETENTION AND DISPOSAL:

Part A: Retained 1 year, or until subsequent rating is prepared, whichever is later.

Part B: Retained for 5 years, or until the fifth annual appraisal is completed, whichever is later.

#### SYSTEM MANAGER(S) AND ADDRESS:

Part A: Chief, Personnel Operations Branch Division of Organization and Personnel Office of Administration U.S. Nuclear Regulatory Commission Washington, DC 20555

Part B: Chairman, Performance Review Board U.S. Nuclear Regulatory Commission Washington, DC 20555

#### NOTIFICATION PROCEDURE:

Director, Office of Administration U.S. Nuclear Regulatory Commission Washington, DC 20555

### RECORD ACCESS PROCEDURES:

Same as "Notification procedure" for each part.

### CONTESTING RECORD PROCEDURES:

Same as "Notification procedure" for each part.

### RECORD SOURCE CATEGORIES:

Part A: Individual to whom record pertains and employee's supervisor.

Part B: Individual to whom record pertains and employee's supervisors; any documents and sources used to develop critical elements and performance standards for that Senior Executive Service position.

45 FR 28847

Published 4/30/80

Comment period expires 5/30/80

### Privacy Act of 1974; Systems of Records, Minor Amendments

AGENCY: United States Nuclear Regulatory Commission (NRC).

ACTION: Proposed minor amendments of systems of records.

**SUMMARY:** The Nuclear Regulatory Commission is proposing minor amendments to the NRC Systems of Records, NRC-30. The amendments clarify and update the information contained in the NRC Systems of Records, in order to allow for contractor access to records on a need-to-know basis.

**COMMENT DATE:** Comments are due on or before May 30, 1980.

**ADDRESS:** Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch.

**FOR FURTHER INFORMATION CONTACT:** Sarah N. Wigginton, FOI/PA Branch, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Phone: (301) 492-8133.

**SUPPLEMENTARY INFORMATION:** In accordance with the Privacy Act of 1974, the Nuclear Regulatory Commission has published notices of those systems of records maintained by the NRC which contain personal information about individuals and from which such information can be retrieved by an individual identifier. The notices were published as a document subject to publication in the annual compilation of Privacy Act documents.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 552a of Title 5 of the United States Code, as amended, notice is hereby given that adoption of the following amendments to the NRC System of Records is contemplated. All interested persons who desire to submit written comments or suggestions for consideration in connection with the proposed amendments should send them to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch by May 30, 1980. Copies of comments on the proposed amendments may be examined at the Commission's Public Document Room at 1717 H Street, N.W., Washington, DC.

1. The paragraphs of NRC-30 entitled "Routine uses of records maintained in the system, including categories of uses and the purposes of such uses," "Storage," "Safeguards," "Retention and disposal," and "System manager(s) and address," are amended to read as follows:

#### NRC-30

\* \* \* \* \*

### ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

Records in the system of records are used as a project management tool in various management records throughout the NRC.

Information in these records may be disclosed for the routine uses specified in paragraph numbers 5 and 6 of the Prefatory Statement.

### POLICIES AND PRACTICES FOR STORING, RETRIEVING, ACCESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:

#### STORAGE:

Maintained in computer files, computer records, on tapes, disks, cards, and microfiche.

\* \* \* \* \*

#### SAFEGUARDS:

Access to and use of these records are limited to those persons whose official duties require such access.

#### RETENTION AND DISPOSAL:

Retained indefinitely in computer files.

#### SYSTEM MANAGER(S) AND ADDRESS:

Director, Office of Management and Program Analysis, U.S. Nuclear Regulatory Commission, Washington, DC 20555.





## PART 40 • STATEMENTS OF CONSIDERATION

requirement of Pub. L. 96-106, there is a need to revoke certain of the immediately effective rules (viz., §§ 40.2a, 40.26(b)(2), and 150.15(a)(7)) which were published in the August 24 Federal Register notice (44 FR 50012).

It should be noted, however, that the effective regulations granting a general license for possession of such byproduct material to NRC licensees in non-Agreement States are not revoked. These regulations remain necessary to prevent licensees from being in technical violation of UMTRCA's requirements concerning byproduct material licenses from the NRC.

The Commission finds that because the §§ 40.2a, 40.26(b)(2), and 150.15(a)(7) are in conflict with the requirements of Pub. L. 96-106, they must be revoked immediately. Because these regulations no longer have any basis in law, good cause exists pursuant to 5 U.S.C. 553 to waive the 30-day comment period, as impracticable and contrary to the public interest, and make the following amendments immediately effective.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, the Uranium Mill Tailings Radiation Control Act of 1978, as amended by the Surface Transportation Assistance Act of 1978 (Pub. L. 96-106), and sections 552 and 553 of Title 5 of the United States Code, the following amendments to Title 10, Parts 40 and 150, Code of Federal Regulations, are published as a document subject to codification.

45FR14199  
Published 3/5/80  
Effective 3/5/80

*Minor and Clarifying Amendments*

See Part 1 Statements of Consideration

45 FR 18905  
Published 3/24/80  
Effective 3/24/80

*Deletion of Reference to Panama Canal Zone; Minor Amendments*

See Part 4 Statements of Consideration.

45 FR 50705  
Published 7/31/80  
Effective 7/31/80

➤ Effective Date 12/24/80 \*

*Safeguards on Nuclear Material Implementation of US/IAEA Agreement*

See Part 75 Statements of Consideration

\* Amended 45 FR 84967

45 FR 55419  
Published 8/20/80  
Effective 9/19/80

### 10 CFR Part 40

#### Deletion of Source Material Medicinals From the General License for Small Quantities of Source Material

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is amending its licensing regulations by deleting the provision for general license authorization of the use of source material<sup>1</sup> in humans by physicians, pharmacists, and other persons receiving source material in the form of medicinals or drugs. Thorotrast, containing alpha-emitting thorium-232 dioxide, was the only source material medicinal used in humans. However, as the radiobiological hazards of alpha-emitting radionuclides became known, the product fell into disuse and production of Thorotrast was discontinued in 1965. This action will require authorization by means of an NRC specific license for internal or external administration of source material, or the radiation therefrom, to human beings.

**EFFECTIVE DATE:** September 19, 1980.

**FOR FURTHER INFORMATION CONTACT:** Deborah A. Bozik, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Telephone 301-443-5860).

**SUPPLEMENTARY INFORMATION:** Thorotrast, authorized for use by the general license in § 40.22, "Small quantities of source material," of 10 CFR Part 40, and used as an X-ray contrast agent, has been the only source material utilized as a medicinal; no other thorium or uranium compounds have been used as source material medicinals. Thorotrast is the colloidal dioxide of thorium-232 which is an alpha-emitting radionuclide. As the radiobiological hazards of these radionuclides became apparent, the carcinogenic potential of Thorotrast became evident, and, in 1965, the production of Thorotrast was stopped. Improvements in X-ray machines and imaging techniques have resulted in Thorotrast being replaced with nonradioactive contrast agents. The Food and Drug Administration (FDA) terminated the approved New Drug Application (NDA) for Thorotrast on June 13, 1977.

NRC and FDA both strive for consistency with respect to each other's

<sup>1</sup> Source material, as defined in 10 CFR 40.4(h) means, among other things, uranium or thorium, or any combination thereof, in any physical or chemical form.

regulations. On March 6, 1980, NRC published a proposed rule (45 FR 14589) to amend the general license in § 40.22 by deleting the authorization for the

following persons to use and transfer small quantities of source material:

- (1) Pharmacists using source material solely for compounding medicinals;
- (2) Physicians using source material for medicinal purposes; and
- (3) Persons receiving possession of source material from pharmacists and physicians in the form of medicinals or drugs.

Under the proposed rule, the following groups would still retain their authorization under this general license to use small quantities of source material for research, development, educational, commercial or operational purposes:

- (1) Commercial and industrial firms;
- (2) Research, educational and medical institutions; and
- (3) Federal, State and local government agencies.

A new paragraph would be added under the proposed rule to the general license in § 40.22 of 10 CFR Part 40 which would prohibit licensees from administering source material, or the radiation therefrom, either internally or externally, to human beings, except where authorized by an NRC specific license.

The public was invited to submit written comments on the proposed rule by May 6, 1980. Eight comments were received, and all supported the proposed amendment. One commenter qualified his support by inquiring if the people whose authorization is being withdrawn by this amendment have been making other use of source material. To the best of the Commission's knowledge, no one in the affected groups has been using source material since Thorotrast production was discontinued in 1965. Therefore, the Commission is adopting the final rule in the form identical to the proposed amendment.

Under the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendment to Title 10, Chapter I, Code of Federal Regulations, Part 40 is published as a document subject to codification.

45 FR 65521  
Published 10/3/80  
Effective 11/17/80

*Uranium Mill Licensing Requirements*

See Part 30 Statements of Consideration

## **PART 40 • STATEMENTS OF CONSIDERATION**

**45 FR 79409**  
**Published 12/1/80**  
**Effective 12/1/80**

*Uranium Mill Licensing Requirements:  
Change of Effective Date for Reporting  
and Recordkeeping Requirements*

**See Part 30 Statements of Consideration**

## PART 50 • STATEMENTS OF CONSIDERATION

45 FR 30614

Published 5/9/80

Effective 7/22/80

### 10 CFR Part 50

#### Periodic Updating of Final Safety Analysis Reports

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is amending its regulations to require each person licensed to operate a nuclear power reactor to submit periodically to the Commission revised pages for its Final Safety Analysis Report (FSAR). These revised pages will indicate changes which have been made to reflect information and analyses submitted to the Commission or prepared as a result of Commission requirement. The amendment is being made to provide an updated reference document to be used in recurring safety analyses performed by the licensee, the Commission, and other interested parties.

**EFFECTIVE DATE:** July 22, 1980.

**Note.**—The Nuclear Regulatory Commission has submitted this rule to the Comptroller General for such review as may be appropriate under the Federal Reports Act, as amended, 44 U.S.C. 3512. The date on which the reporting requirement of this rule becomes effective, unless advised to the contrary, accordingly, reflects inclusion of the 45-day period which that statute allows for such review (44 U.S.C. 3512(c)(2)).

**FOR FURTHER INFORMATION CONTACT:** Mr. Morton R. Fleishman, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, telephone 301-443-5921.

**SUPPLEMENTARY INFORMATION:** On November 8, 1976, the Nuclear Regulatory Commission published in the *Federal Register* (41 FR 49123) a notice of proposed rule making inviting written suggestions or comments on the proposed rule by December 23, 1976. A notice of correction and extension of comment period was published in the *Federal Register* on December 27, 1976 (41 FR 56204) in which the comment period was extended to January 26, 1977. The notices concerned proposed amendments to 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to require each applicant for, or holder of, a power reactor operating license which would be or was issued after January 1, 1963 to submit periodically to the Commission revised pages for its Final Safety Analysis Report (FSAR). These revised pages would indicate changes made in the facility or the procedures for its

operation and any analyses affected by these changes. Thirty-one persons submitted comments regarding the proposed amendments. The commenters could be roughly divided into three groups with seventeen supporting the rule with comments, eleven opposed to the rule, and three neutral. Copies of the comments received may be examined in the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C.

The substantive areas of comment can be categorized generally as follows:

1. Clarification of Rule
2. Applicability of Rule
3. Content of FSAR
4. Scope of Rule
5. Timing of Submittals
6. Relation of Rule to Other Rules and Reports
7. Legal Status of Updated FSAR
8. Cost/Benefit of Rule

In response to the comments received, the Commission is modifying the rule to (a) extend its applicability to all power reactors licensed to operate, (b) exclude applicants for operating licenses, (c) clarify the wording of the rule, (d) reduce its impact on power reactor licensees by relaxing some of the time requirements, and (e) require the initial revision to be a complete FSAR.

When the proposed rule was published for public comment, its applicability was limited to those plants licensed after January 1, 1963 in order to exempt five (5) older facilities. The Commission believed that it would not be feasible for these licensees to implement the rule because there is no integrated document comparable to an FSAR for their facilities. Since publication of the proposed rule, the Commission has initiated a program in which the NRC staff is making a systematic safety evaluation of eleven (11) nuclear power facilities licensed for operation before 1972. The purpose of this systematic evaluation program (SEP) is to determine and document the degree to which the eleven (11) facilities meet current licensing requirements for new plants. Of the five (5) plants licensed prior to January 1, 1963 that are still licensed to operate, three (3) are included in the SEP. The remaining two (2) plants,<sup>1</sup> which presently are shut down, will be subject to the provisions of the rule as long as their licenses authorize operation.

The licensees participating in the SEP probably will be requested to supply a considerable amount of information during the program. Requiring them, in addition, to update their FSARs could prove to be excessively burdensome and could result in duplication of reports.

<sup>1</sup> The two facilities are Indian Point Unit No. 1 and Humboldt Bay Unit No. 3.

The information generated during the program and the manner in which it is collated will result in a completed FSAR at the conclusion of the program. For these reasons licensees of facilities being subjected by the NRC to a systematic evaluation program will not be required to comply with the provisions of this rule until they are notified by letter by the NRC's Director of the Office of Nuclear Reactor Regulation that, for their particular facility, the program has been completed. Because of the considerations just mentioned, that part of the proposed rule which limited the applicability to facilities licensed after January 1, 1963 has been deleted and the rule will apply to all power reactors licensed to operate.

The FSAR required to be updated by the rule is the original FSAR submitted as part of the application for the operating license. It would not include the subsequent supplements and amendments to the FSAR or the license that may have been submitted either in response to NRC questions or on the applicant's or licensee's own initiative following the original submittal. These various supplements and amendments must be appropriately incorporated into the original FSAR to create a single, complete and integral document. The initial revision to be filed should contain those pages from the originally submitted FSAR that are still applicable plus new replacement pages that appropriately incorporate the effects of supplements, amendments and other changes that have been made. This will result in a single, complete document being filed, that can then serve as the baseline for future changes.

Commenters have asked about the proper format to be used when making the FSAR submittal. Since the format of the FSAR is not covered by regulation, the rule does not specify a particular format. The NRC staff has provided guidance for the preparation of FSARs in Regulatory Guide 1.70, Revision 2, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants." However, many FSARs were developed prior to any specific guidance on format. The format to be used for the FSAR revisions is the option of the licensee, but the Commission expects that the format will probably be the same as the format of the original FSAR. No analyses other than those already prepared or submitted pursuant to NRC requirements (either originally with the application, or as part of the operating license review process, or as required by § 50.59 or other NRC requirement, or to support license amendments) are required to be performed by the licensee because of this rule. However, analyses existing in the FSAR which are known

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to be inaccurate or in error as a result of new analyses performed by the licensee pursuant to NRC requirements, would have to be revised. Specialized studies provided in the FSAR, such as on volcanic hazards or quality assurance, should include the latest information that has been developed in response to NRC requirements. New analyses (i.e., analyses not previously included in FSAR) which were required during consideration of unreviewed safety questions,<sup>2</sup> technical specification changes, or other licensing questions, may be incorporated as appendices or otherwise appropriately inserted within the FSAR.

Program type material that is referenced by the FSAR, such as the Quality Assurance Program or the Emergency Plan, should be referenced accurately. If such material has been revised or amended, the latest revision should be referenced. A description of physical changes to the facility should be included in the update after the changes have been approved for use and are operable. The level of detail to be maintained in the updated FSAR should be at least the same as originally provided. Minor differences between actual and projected population figures or other such changes in the site environment need not be reported unless the conclusions of safety analyses relative to public health and safety are affected and the licensee has prepared new analyses as a result of NRC requirements.

Commenters have questioned the relation of the proposed FSAR updating requirements to other reporting requirements such as the Annual Operating Report and § 50.59(b) reporting. It is not the Commission's intention to require submittal of duplicative reports. The Commission is eliminating the requirement for the Annual Operating Report. This will reduce significantly the reporting burden of licensees. There has been no requirement that § 50.59(b) reporting be part of the licensee's Annual Operating Report. This information generally has been included in the Annual Operating Report as a convenience, but it could have been submitted separately and the licensee still would have complied with § 50.59(b) which merely requires reporting "annually or at such shorter

intervals as may be specified in the license." Furthermore, the report required under § 50.59(b) is only "a brief description of such changes, tests, and experiments, including a summary of the safety evaluation of each." The § 50.59(b) reporting may not be detailed sufficiently to be considered adequate to fulfill the FSAR updating requirement. The degree of detail required for updating the FSAR will be generally greater than a "brief description" and a "summary of the safety evaluation." However, there is nothing that precludes submitting the § 50.59(b) report along with the FSAR update submittal and thus satisfy § 50.59(b) along with § 50.71(e). Parts of the FSAR submittal may be referenced by the § 50.59(b) report.

Several commenters have raised legal questions concerning the proposed rule including questions relative to the purpose of the rule, the implication concerning re-reviews, the status of completed hearings, and prior license approvals. The rule is only a reporting requirement to insure that an updated FSAR will be available. Submittal of updated FSAR pages does not constitute a licensing action but is only intended to provide information. It is not intended for the purpose of re-reviewing plants. Matters which have been considered previously during hearings will not be reconsidered as a result of the FSAR submittals. Thus, for example, approvals of license amendments and technical specification changes are independent of the FSAR updating process and once approved would not be subject to further consideration simply because the FSAR is updated. This, of course, does not preclude the reevaluation of previous positions based on new information or new considerations. The material submitted may be reviewed by the NRC staff but will not be formally approved. The new pages will be accepted as representing the licensee's position at the time of submittal and will be utilized in any subsequent reviews or NRC staff activities concerning that facility.

After consideration of the comments that were received and other factors, the Commission has adopted the amendment to Part 50 as set forth below.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and section 553 of title 5 of the United States Code, the following amendment to 10 CFR Part 50 is published as a document subject to codification.

45 FR 50705

Published 7/31/80

Effective 7/31/80

➤ Effective Date 12/24/80 \*

*Safeguards on Nuclear Material-  
Implementation of US/IAEA Agreement*

See Part 75 Statements of Consideration.

45 FR 55402

Published 8/19/80

Effective 11/3/80

### 10 CFR Parts 50 and 70

#### Emergency Planning

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is upgrading its emergency planning regulations in order to assure that adequate protective measures can and will be taken in the event of a radiological emergency. Nuclear power plants and certain other licensed facilities are required to submit their emergency plans, together with the emergency response plans of State and local governments, to the Commission. The Commission and the Federal Energy Management Agency will review the plans for adequacy. The amendment also extends emergency planning considerations to "Emergency Planning Zones", and makes additional clarifications.

**EFFECTIVE DATE:** November 3, 1980.

**Note.**—The Nuclear Regulatory Commission has submitted this rule to the Comptroller General for review of the reporting requirements in the rule, pursuant to the Federal Reports Act, as amended (44 U.S.C. 3512). The date on which the reporting requirements of the rule become effective includes a 45-day period, which the statute allows for Comptroller General review (44 U.S.C. 3512(c)(2)).

**FOR FURTHER INFORMATION CONTACT:** Mr. Michael T. Jamgochian, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (telephone: 301-443-5966).

**SUPPLEMENTARY INFORMATION:** On September 19, 1979 and on December 19, 1979, the Commission published for public comment (44 FR 54308 and 44 FR 75167) proposed amendments to its emergency planning regulations for

<sup>2</sup> As defined in § 50.59(a)(2). "A proposed change, test, or experiment shall be deemed to involve an unreviewed safety question (i) if the probability of occurrence or the consequence of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report may be increased; or (ii) if a possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report may be created; or (iii) if the margin of safety as defined in the basis for any technical specification is reduced."



## PART 70 • STATEMENTS OF CONSIDERATION

**Register.** Based on the public comments and other considerations, the Commission has adopted the proposed amendments, with modifications as set forth below.

The effective physical protection amendments are designed to have overall equivalency to the recommendations of INFCIRC/225 Rev. 1, but there are differences in the detailed requirements. INFCIRC/225 Rev. 1 recommendations are designed to minimize the possibilities of theft or sabotage of SNM of moderate or low strategic significance. The effective amendments have been primarily designed to require early detection of theft of SNM of moderate or low strategic significance. However, in requiring early detection capabilities, these amendments deter the possibilities of theft or diversion. In the judgment of the Commission, the degree of protection afforded by the containment, monitoring and detection procedures required by these amendments provide equivalency to the INFCIRC/225 Rev. 1 recommendations for protection of theft or diversion of SNM.

Significant differences from the proposed rule published for comment on May 24, 1978 are: (1) Plutonium-Beryllium (PuBe) sealed sources would be exempted from the physical protection requirements; (2) Plutonium with isotopic concentration exceeding 80 percent in plutonium-238 would be exempted from the physical protection requirements; (3) package and vehicle search requirements at facilities where special nuclear material of moderate strategic significance is used or stored have been changed; (4) The period of time allotted for submittal of a licensee plan to implement these requirements has been changed from 60 days to 120 days after the effective date of the amendment. In addition, editorial and clarifying changes were made and some definitions added to clarify the intent of the regulations.

The following discussion pertains to items (1) through (4) above.

(1) PuBe sealed sources—Commenters stated that the cost of providing the required physical protection for PuBe sealed sources would be prohibitive from the point of view of the limited budgets available at universities where most of the sources are now located. Imposition of the proposed requirements, it was said, would result in the curtailment of the use of PuBe sources at some sites with a significant impact on the educational and research programs at those institutions. In view of the very small quantities of plutonium found in PuBe sealed sources (generally, from 16 to 161 grams) and the fact that

potential adversaries wishing to obtain a 5 kg formula quantity of plutonium would have to commit separate acts of theft at a large number of widely separated sites without being detected, the Commission has decided that the threat to the common defense and security of this country was sufficiently low that physical security measures should not be required for PuBe sealed sources. There is an upper limit of 500 grams of plutonium to which this exemption can be applied because greater than a 500 gram accumulation of plutonium in this form invalidates the basis for this exemption. IAEA guidelines allow for such exceptions in the case of research type facilities.

(2) More than 80 percent Pu-238—The proposed rule has been amended to reflect that plutonium with isotopic concentration exceeding 80 percent in plutonium-238 would be exempted from the physical protection requirements. This change corrects an oversight in the initially proposed amendments in which it was intended that such material would be exempted to be consistent with the definitions of Category II and III material in the IAEA document INFCIRC/225/Rev. 1.

(3) Search requirements—Package and vehicle search requirements at facilities at which special nuclear material of moderate strategic significance is used or stored have been changed. As revised, random searches are only required regarding items leaving controlled access areas, and not of those entering. The primary objective of entry searches is to detect materials which could be useful in sabotage. Since protection against sabotage is not within the scope of the proposed amendments, an entry search requirement is not necessary.

(4) Submission and Implementation of Plans—Several commenters stated that more time would be needed than the sixty days allowed for submission of physical security plans, or amendments to them, following the date the proposed amendments become effective.

The Commission agrees that more time may be required, especially in the case of licensees who have limited managerial and financial resources, and has changed the submission date to be 120 days following the effective date of the amendment. In addition, the licensee is now required to implement the approved security plan within 240 days following the effective date of the amendment or within 30 days after the plan is approved, whichever is later.

Concurrent with the publication of the amendments, the NRC is publishing a guide entitled "Standard Format and Content for the Licensee Physical Security Plan for the Protection of

Special Nuclear Material of Moderate or Low Strategic Significance." The guide is being published for a sixty-day comment period and will be reissued with comments taken into consideration. The amendments to 10 CFR Parts 70, 73 and 150 would become effective at this time (120 days after publication) (November 21, 1979). Licensees would therefore have 240 days after publication of the amendments to submit their plans. The plan would have to be implemented 30 days after approval by the Commission or 360 days after (date of publication in the **Federal Register**) (July 24, 1979).

Another area of comment dealt with employee screening. Some of the licensees interpreted the screening requirement to call for a full field background investigation of all personnel entering the controlled access areas where the material is used or stored. The wording of the rule has been revised to more clearly indicate that the requirement is merely one requiring a screening based on knowledge of persons permitted access rather than a formal security investigation. The guidance package being issued with the rule explains more fully the intent of this requirement.

There was one other area of comment for which no specific changes were made to the amendments but which is of significance. These comments dealt generally with the technical justification for the proposed amendments.

Many of the commenters questioned the technical justification for the proposed amendments on the basis of the lack of detailed information regarding the threat; the additional costs

of implementation they perceived to be incommensurate with only marginal improvements in physical protection; and the impacts on the licensees' ongoing educational and research programs. Particular attention was focused by some commenters on the physical protection requirements for low enriched uranium.

The technical justification for the U.S. adoption of the proposed amendments is contingent on both domestic and international factors, which are closely interrelated. Current NRC physical protection regulations apply primarily to strategic special nuclear material (uranium enriched in the isotope U-235 to 20% or greater, U-233, and plutonium) in quantities of five formula kilograms or greater. There are no specific physical protection requirements for quantities in lesser amounts. Yet, it can be properly argued that a 4.9 formula kilogram quantity of SNM is about as important a quantity as 5.0 kilograms. Multiple thefts of such materials in close to formula quantities could result in the

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accumulation of more than a formula quantity. The proposed detection requirements are considered to provide sufficient protection with minimum added cost so as not to affect educational and research programs. Since the requirements are of a detection nature rather than prevention, characterization of the adversary in the regulations was deemed not to be necessary.

In regard to low enriched uranium (LEU) (enrichments less than 20%), clandestine enrichment to higher levels may go beyond the capability of subnational terrorists, but it does not go beyond the capability of other governments. Unless properly safeguarded, low enriched uranium could be stolen on behalf of foreign governments and enriched to explosive useable levels after it is smuggled out of the U.S.

The Nuclear Non-Proliferation Act of 1978 specifies that NRC shall promulgate regulations which assure that physical security measures are provided to special nuclear materials exported from the United States without specifying whether the materials are low enriched uranium or high enriched uranium. Pursuant to this legislation, the Commission has promulgated 10 CFR Part 110.43 which provides among other things that:

"(b) Commission determinations on the adequacy of physical security programs in recipient countries for Category II and III quantities of material will be based on available relevant information and written assurances from the recipient country or group of countries that physical security measures providing as a minimum protection comparable to that set forth in INFCIRC/225 will be maintained."

While the proposed amendments would provide a needed extension of domestic physical protection to special nuclear materials for which the level of physical protection required was not previously specified, the full value of such protection could not be realized until similar protection is afforded all such material among the nations utilizing such materials. Physical protection measures similar to those proposed, which are based on the recommendations of the IAEA Information Circular INFCIRC/225/Rev. 1, have already been adopted by several countries.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Parts 70, 73, and 150 are published as a document subject to codification.

44 FR 47918  
Published 8/16/79  
Effective 9/17/79

*Licensing of Production and Utilization Facilities; Facilities and Access for Resident Inspection*

See Part 50 Statements of Consideration.

44 FR 68184  
Published 11/28/79  
Effective 3/25/80

*Physical Protection Upgrade Rule*

See Part 73 Statements of Considerations.

45FR14199  
Published 3/5/80  
Effective 3/5/80

*Minor and Clarifying Amendments*

See Part 1 Statements of Consideration

45 FR 18905  
Published 3/24/80  
Effective 3/24/80

*Deletion of reference to Panama Canal Zone; Minor Amendments*

See Part 4 Statements of Consideration.

45 FR 50705  
Published 7/31/80  
Effective 7/31/80

» Effective Date 12/24/80 \*  
*Safeguards on Nuclear Material-  
Implementation of US/IAEA Agreement*

See Part 75 Statements of Consideration .

45 FR 55402  
Published 8/19/80  
Effective 11/3/80

*Emergency Planning*

See Part 50 Statements of Consideration

45 FR 65521  
Published 10/3/80  
Effective 11/17/80

*Uranium Mill Licensing Requirements*

See Part 30 Statements of Consideration

45 FR 73012  
Published 11/4/80  
Effective Date: Upon the US/IAEA  
Safeguards Agreement's entry into  
force and publication of notice  
thereof in the Federal Register  
» Effective Date 12/24/80 \*

*Safeguards on Nuclear Material;  
Implementation of US/IAEA  
Agreement*

See Part 75 Statements of Consideration

45 FR 74693  
Published 11/12/80  
Effective 11/28/80

*Licensing Requirements for the Storage  
of Spent Fuel in an Independent Fuel  
Spent Storage Installation*

See Part 72 Statements of Consideration

45 FR 76968  
Published 11/21/80  
Effective 2/4/81

*Criteria and Procedures  
for Determining Eligibility  
for Access to or Control  
Over Special Nuclear Material*

See Part 11 Statements of Consideration

\*Amended 45 FR 84967

## PART 73 • STATEMENTS OF CONSIDERATION

45 FR 72108  
Published 10/31/80  
Effective 10/31/80

### 10 CFR Part 73

#### Physical Protection of Plants and Materials Requirements for the Physical Protection of Nuclear Power Plants

**AGENCY:** U.S. Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The U.S. Nuclear Regulatory Commission is extending from November 1, 1980 to December 1, 1980 its current relief from pat-down searches of regular employees at nuclear power reactors in order to allow time for the Commission to consider revisions to its rules in 10 CFR § 73.55 intended to finalize requirements for entry searches at such facilities.

**EFFECTIVE DATE:** October 31, 1980.

**FOR FURTHER INFORMATION CONTACT:** L. J. Evans, Jr., Chief, Regulatory Improvements Branch, Division of Safeguards, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, (301) 427-4181.

**SUPPLEMENTARY INFORMATION:** On July 31, 1979, the Commission changed the date from August 1, 1979, to November 1, 1979, when pat-down searches of regular employees of nuclear power plant licensees had to be implemented. The rationale for this extension was provided in the *Federal Register* notice on this subject, 44 FR 47758, August 15, 1979. The Commission further extended the implementation date to November 1, 1980. The rationale for that extension is contained in 44 FR 65969.

The Commission is presently considering issuing proposed revisions to 10 CFR § 73.55(d)(1) to finalize requirements for personnel searches at protected area portals of power reactors. The *thirty day* extension of the relief from physical pat-down searches of regular employees contained herein is intended to allow sufficient time for Commission consideration of the proposed revisions. Because this rule delays a requirement, and merely continues a temporary situation for a limited period of time, the Commission finds that notice and public procedure are unnecessary and that the change can be made immediate effective without the customary 30 days period of notice required by 5 U.S.C. 553.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy

Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following Amendment to Title 10 Chapter 1, Code of Federal Regulations, Part 73 is published as a document subject to codification.

45 FR 74693  
Published 11/12/80  
Effective 11/28/80

*Licensing Requirements for the Storage of Spent Fuel in an Independent Fuel Spent Storage Installation*

See Part 72 Statements of Consideration

45 FR 79410  
Published 12/1/80  
Effective 12/1/80

### 10 CFR Part 73

#### Searches of Individuals at Power Reactor Facilities

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is extending its current relief from pat-down searches of regular employees at nuclear power reactors in order to accommodate a rulemaking proceeding concerning revisions to its rules in § 73.55 intended to finalize requirements for entry searches at such facilities.

**EFFECTIVE DATE:** December 1, 1980.

**FOR FURTHER INFORMATION CONTACT:** L. J. Evans, Jr., Chief, Regulatory Improvements Branch, Division of Safeguards, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, (301) 427-4181.

**SUPPLEMENTARY INFORMATION:** On July 31, 1979, the Commission changed the date from August 1, 1979, to November 1, 1979, when pat-down searches of regular employees of nuclear power plant licensees had to be implemented. The rationale for this extension was provided in the *Federal Register* notice on this subject, 44 FR 47758, August 15, 1979. The Commission further extended the implementation date to November 1, 1980. The rationale for that extension is contained in 44 FR 65969.

The Commission plans to issue

proposed revisions to 10 CFR § 73.55(d)(1) to finalize requirements for personnel searches at protected area entry portals of power reactors. The extension of the relief from physical pat-down searches of regular employees contained herein is intended to allow sufficient time for public comment on the proposed search requirements and their implementation, if adopted. Because this rule delays a requirement, and merely continues a temporary situation for another limited period of time, the Commission finds that notice and public procedure are unnecessary and that the change can be made immediately effective without the customary 30 day period of notice required by 5 U.S.C. 553.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following Amendment to Title 10 Chapter 1, Code of Federal Regulations, Part 73 is published as a document subject to codification.

45 FR 80271  
Published 12/4/80

*Licensing Requirements for the Storage of Spent Fuel in an Independent Spent Fuel Storage Installation; Correction*

See Part 72 Statements of Consideration.

45 FR 83195  
Published 12/18/80  
Effective 12/18/80

### 10 CFR Part 73

#### Physical Protection Upgrade Rule; Clarification of Effective Dates

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Clarification of effective dates.

**SUMMARY:** The NRC issues this notice to clarify three dates concerning the development and implementation of plans required of nuclear power reactor licensees for the training and qualification of security personnel. Because of ambiguous effective date provisions in amendments to 10 CFR 73.55(b)(4), published November 28, 1979 (44 FR 68184), incorrect dates appeared in the January 1, 1980 revision of 10 CFR

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Chapter I. The text of § 73.55(b)(4) is published below in its entirety to clarify this ambiguity.

**EFFECTIVE DATES:** Thursday, December 18, 1980.

**FOR FURTHER INFORMATION CONTACT:**

Mr. L. J. Evans, Jr., Chief, Regulatory Improvements Branch, Division of Safeguards, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, 301-427-4181, or Mr. F. P. Gillespie, Chief, Safeguards Standards Branch, Division of Siting, Health and Safeguards Standards, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, DC 20555, 301-443-5907.

**SUPPLEMENTARY INFORMATION:** The text of 10 CFR 73.55(b)(4) as corrected reads as follows:

**§ 73.55 [Corrected]**

\* \* \* \* \*

# UNITED STATES NUCLEAR REGULATORY COMMISSION RULES and REGULATIONS

TITLE 10, CHAPTER 1, CODE OF FEDERAL REGULATIONS — ENERGY

## PART 75

### SAFEGUARDS ON NUCLEAR MATERIAL— IMPLEMENTATION OF US/IAEA AGREEMENT

#### STATEMENTS OF CONSIDERATION

45 FR 50705

Published 7/31/80

Effective 7/31/80

➤ Effective Date 12/24/80 \*

10 CFR Parts 40, 50, 70, 75, 150, and 170

#### Safeguards on Nuclear Material— Implementation of US/IAEA Agreement

**AGENCY:** U.S. Nuclear Regulatory  
Commission.

**ACTION:** Final rule.

**SUMMARY:** The Commission is amending its regulations to enable the United States to implement the US/IAEA Safeguards Agreement, with respect to licensed activities, as soon as the Agreement enters into force. Implementation of the Agreement will require the cooperation of NRC and Agreement State licensees, in accordance with appropriate regulations. The rules published here are the means by which the Agreement will be implemented with respect to licensed activities.

**EFFECTIVE DATE:** Upon the Agreement's entry into force and publication of notice thereof in the Federal Register.\*

\***Note.**—The Nuclear Regulatory Commission has submitted this rule to the Comptroller General for such review as may be appropriate under the Federal Reports Act, as amended, 44 U.S.C. 3512. The reporting requirements of this rule will not become effective until clearance is granted by the General Accounting Office following review as set forth in 44 U.S.C. 3512(c)(2). Comments regarding the report forms and instructions may also be submitted directly to the Commission. Submissions made within 21 days after GAO's publication, in the Federal Register, of notice of receipt of NRC's report proposals will be considered by the Commission before the forms are placed into use.

**FOR FURTHER INFORMATION CONTACT:** Mr. L. C. Solem, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Phone 301-443-5903); Mr. James R. Wolf, Office of the Executive Legal Director, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555

(Phone 301-492-8694); or Mr. Paul K. Morrow, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Phone 301-427-4004).

**SUPPLEMENTARY INFORMATION:** On May 25, 1978, the Nuclear Regulatory Commission published in the Federal Register (43 FR 22365) proposed amendments to Parts 40, 50, 70, and 150 and a new proposed Part 75 to Title 10, Code of Federal Regulations. Interested persons were invited to submit written comments or suggestions in connection with the proposed amendments within 60 days after publication in the Federal Register. On November 21, 1978, the Commission published a notice (43 FR 54255) regarding the availability of certain supplemental documents and extending the period of comment for 30 days. On July 17, 1979, the Commission published revised proposed amendments (44 FR 41466). Interested persons were invited to submit written comments and suggestions. Upon consideration of the comments received from 7 licensees and the Texas Department of Health, the Nuclear Regulatory Commission has decided to adopt and publish, with modification, the revised proposed amendments to Title 10, Chapter I, Code of Federal Regulations. Copies of the comments and an analysis of them by the NRC staff are available in the Commission's Public Document Room.

#### Overview

The United States, as a party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), has joined with other nations in an effort to limit the spread of nuclear weapons. To encourage widespread adherence to the NPT by non-nuclear-weapon States, President Johnson in 1967 announced that the United States would permit IAEA to apply its safeguards to nuclear activities in this country—excluding only those with direct national security significance. This policy has been reaffirmed by each succeeding President and has been referred to by other Governments as a consideration

affecting their decisions to ratify the NPT.

The instrument for applying IAEA safeguards in the United States would be a formal Agreement between the U.S. Government and the International Atomic Energy Agency, to which the U.S. Senate gave its advice and consent to ratification as a treaty on July 2, 1980. The US/IAEA Agreement contains provisions which parallel agreements between the IAEA and non-nuclear-weapon States, the principal difference being the exclusion of national security activities. Implementation of the Agreement will require the cooperation of NRC and Agreement State licensees, in accordance with appropriate regulations. The rules published here are the means by which the Agreement will be implemented with respect to licensed activities.

The provisions of the Agreement were the subject of hearings before the Senate Committee on Foreign Relations on June 22 and December 11, 1979. In the development of these rules, the Commission has considered the matters discussed during those hearings and subsequent Senate deliberations. In particular the rules reflect our intention to work closely with licensees so as to ensure, insofar as possible, that the Agreement can be implemented in a spirit of full cooperation. It is widely recognized that IAEA safeguards can help protect the international community from nuclear proliferation, and the Commission perceives a general willingness to join together in efforts toward that end.

#### Changes

In summary, differences from the proposed amendments published for comment on July 17, 1979, are: (1) The regulations now specifically refer to Facility Attachments (or Transitional Facility Attachments) negotiated under the Agreement and indicate that certain provisions of the Facility Attachments will be reflected in license conditions; (2) licensees' opportunities for consultation are expanded; (3) various clarifying amendments have been made

\* Amended 45 FR 84967



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to reflect more clearly the structure of the Agreement, particularly with respect to identifications made under either the principal text or the Protocol; (4) procedures are provided for resolution of certain issues outside the context of a show-cause proceeding; (5) inspections are categorized by type, with inspectors' access rights further defined; (6) reference is made to a licensee's opportunity to propose that a special material balance area be established around process steps involving commercially sensitive information; (7) the standard for measuring sufficiency of installation information is revised to correct the implication that determinations are made unilaterally by IAEA; (8) licensees are advised not to include details of physical security plans in installation information; (9) provisions for reporting of modifications affecting installation information have been clarified and relaxed, particularly with respect to emergency or unforeseen situations; (10) the Commission's intention to provide NRC representatives to accompany IAEA inspectors is stated more positively; (11) licensees are relieved of the responsibility to revise their material accounting and control procedures until the Facility Attachment has been completed; (12) requirements with respect to records and reports describing the isotopic composition of licensees' holdings have been made less burdensome; (13) the inventory change report provision includes a better definition of the "concise note" requirement and is conformed to domestic safeguards regulations, particularly with respect to submission formalities; (14) scheduling for material status reports is made more flexible and the occasions when such reports are required are described more precisely; (15) the special reports provision has been revised with a view to minimizing efforts beyond those called for under the Agreement; (16) the Commission's intent to give prompt notice to a licensee when its installation is no longer subject to application of IAEA safeguards is made explicit; the regulations now state that the IAEA will "reimburse for" (instead of the less specific "bear the cost of") certain expenses; (18) the provision pertaining to the breaking of IAEA seals has been stricken; and (19) miscellaneous minor changes have been made for purposes of clarification.

The following discussion pertains primarily to items (1) through (19) above. In some cases, the discussion also treats related suggestions which were considered by the Commission, but which—for the reasons stated—were not accepted.

### (1) Facility Attachments.

Implementation of the Agreement will require that a Facility Attachment be prepared for each installation where nuclear material subject to IAEA safeguards is located. (A Transitional Facility Attachment, which may omit a number of provisions, such as those applicable to inspections and special reports, will have to be prepared for an installation identified under the Protocol to the Agreement.) The proposed rule made no explicit reference to the Facility Attachment, but instead simply noted that certain written communications (intended to be based upon the Facility Attachment) would be binding upon licensees.

The Commission believes that the addition of language that refers expressly to the Facility Attachment will clarify the implementation process. Thus, instead of affording a licensee an opportunity to be consulted with respect to any matters that are to be the "subject of Agency determinations," the final rules relate licensee participation specifically to the contents of the Facility Attachment (or Transitional Facility Attachments). A further clarification is achieved by providing that certain provisions of the Facility Attachment will be referred to or reflected in license conditions. These changes appear in § 75.4 (additional definitions), § 75.8 (dealing with Facility Attachments), and §§ 75.11, 75.21, 75.22, 75.34, 75.35, 75.36, 75.42, 75.45 and 75.46 (references to license conditions). However, because Agreement State licensees are not subject to NRC license conditions, § 150.17a has been amended to indicate that the equivalent of license conditions would be provided, for such licensees, in the form of orders issued under section 274m of the Atomic Energy Act.

We have not implemented a suggestion that certain specific factors (e.g., cost-effectiveness) be identified as considerations that will influence the provisions of Facility Attachments. It is preferable to use general terms because of the wide range of provisions in the Agreement that must be given effect.

(2) Consultation. Several commenters once again noted the importance of licensees playing an active role in the negotiation of the Facility Attachment. The final rules accommodate these concerns by giving assurance that a licensee will be afforded a reasonable opportunity to participate in the development of the Facility Attachment and to review and comment upon it before it has been agreed to by the United States. (See § 75.8.) The Commission will give full and fair consideration to the comments of the licensee and will provide, on request, a

statement of reasons for any conclusions it has reached that are contrary to the views of the licensee.

A number of commenters raised issues that will be addressed when Facility Attachments are prepared. The revised consultation provision gives further recognition to the rights of licensees to be heard at that time. It would be premature to accommodate such concerns in the rule, however, as their resolution will require agreement with the IAEA.

(3) Terminology conforming to Agreement. Several changes relate the language of the regulations more closely to that of the Agreement. Thus, as already mentioned, the final rules refer specifically to Facility Attachments and Transitional Facility Attachments. Similarly, where the context requires, the regulations now explicitly differentiate obligations arising under the principal text of the Agreement (relating to licensees whose installations are subject to the application of IAEA safeguards, including a program of inspections) from licensee obligations which arise under the Protocol to the Agreement.

The revised definition of "Agreement" points out that the term includes the Protocol "unless otherwise specified." Where the intent is to refer specifically either to the principal text on the one hand or to the Protocol on the other, the language so indicates. (See §§ 75.4(g), 75.4(q), 75.8, 75.41.) Although references to the Agreement in §§ 75.42 through 75.46 relate to activities under the principal text of the Agreement, and not the Protocol, limiting language was not inserted because in those sections the references back to § 75.41 adequately indicate that it is the principal text that is relevant.

Note also the addition of the defined term "identification under the Agreement" (§ 75.4(j)), which includes "identifications" (selections by IAEA from the eligible list) made under either Article 39(b) of the principal text of the Agreement or Article 2(a) of the Protocol. This term is used in the definitions of Facility Attachment and Transitional Facility Attachment, and in §§ 75.11, 75.21, 75.31, and 75.41. The significance of this addition is that it limits the implementation of the reporting and other provisions of the regulations to those installations which have been selected by IAEA under the principal text of the Agreement or the Protocol. In view of the applicable time constraints, the Commission had earlier contemplated that requests for installation information, in particular, might be made before formal identification by IAEA, but now believes that such a procedure should be

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efficiency of administering the regulations.

### Discussion of Other Comments

In addition to the matters referred to above, the Commission has considered carefully all the issues identified in the comments received. Some of these, although not resulting in changes to the proposed rule, merit additional discussion, as follows:

**Comment:** Licensees should not be required to maintain two documents pertaining to material accounting and control, one for domestic purposes and one for IAEA purposes.

**Response:** As reflected in the final rule, NRC recognizes the desirability of reconciling the requirements of 10 CFR Parts 70 and 75 insofar as practicable. To the extent that duplication can be eliminated, we shall continue to make every effort to do so. Suggestions from licensees, drawn from their actual experience, will be welcome at any time.

**Comment:** Schedules for implementation of the Agreement do not allow sufficient time for licensees to make necessary preparations.

**Response:** The regulations, especially as revised, provide as much time as is

permitted under the applicable provisions of the Agreement and Subsidiary Arrangements. Licensees are encouraged to make advance preparations so that installation information can be submitted promptly when requested by the Commission and so that applicable procedures, including initial inventory reporting, can be implemented in a timely fashion.

**Comment:** Experimental and research facilities should not be designated for the application of IAEA safeguards.

**Response:** Such facilities are within the scope of the Agreement. So long as selections are made in conformity with the Agreement and Subsidiary Arrangements, the Commission would have no occasion to urge any particular course of action upon the IAEA. In any event, the question cannot be dealt with in the context of the present rulemaking action.

**Comment:** NRC should provide, in the rule, more specific guidance regarding the information that must be submitted as installation information and as routine reports.

**Response:** Detailed guidance has been prepared by the NRC staff and is now available. This guidance includes various new or revised forms, together with instructions for their preparation. These are being submitted to the General Accounting Office for clearance pursuant to 44 U.S.C. 3512. GAO will publish notice of submission, at which time affected persons will have the

opportunity to comment. Written data, views, or arguments regarding the forms and instructions may also be submitted directly to the Commission. Submissions made within 21 days after GAO's publication, in the *Federal Register*, of a notice of receipt of NRC's report proposals will be considered by the Commission before the forms are placed into use.

**Comment:** The regulations should indicate that the licensee need not include information beyond what is necessary for the Agency to make knowledgeable determinations.

**Response:** The proposed language fails to express affirmatively, as it should, just what a licensee must do. The formulation in § 75.11(d)—that the information shall be sufficiently detailed to enable knowledgeable determinations to be made in the development of Facility Attachments—is preferable.

**Comment:** The requirement that licensees submit a description of proposed procedures (as opposed to existing systems) is nebulous, may be applied unduly broadly, and is unnecessary in view of after-the-fact reports of changes in the safeguards system.

**Response:** The language in question (§ 75.11(b)(4)) implements Article 43(d) of the Agreement and accordingly has not been changed. However, as the forms supplied under § 75.11(d) will make clear, the licensee will not be called upon to propose any new procedures for purposes of compliance with the provisions of Part 75. The "proposed procedures" which must be described are those which the licensee intends to institute, for other reasons, but which are not yet in effect. (Our prior comments on this subject are withdrawn, to the extent they are inconsistent with this statement.) The details of the procedures, as opposed to a description thereof, would be required only when necessary for knowledgeable determinations to be made in the development of Facility Attachments.

**Comment:** The regulations should provide for defining in the Facility Attachment the categories of information that will be treated as being particularly sensitive.

**Response:** The commenter's concern relates to the avoidance of inadvertent loss of the protection contemplated by § 75.12(b)(1). The suggested amendment would be inappropriate, however, because the determination of particular sensitivity is to be made by the Commission; it is not a subject to be covered in the Facility Attachment. Indeed, the information in question most likely would be supplied to the IAEA before the Facility Attachment even has been prepared. To minimize the risk that

available protection is lost through inadvertence, the forms supplied by the Commission (§ 75.11(d)), or the accompanying letter of transmittal, will call attention to the provisions of § 75.12. This may be done by reference to that section, by reciting it, or by including appropriate questions reflecting its terms.

**Comment:** Licensees should not be required to provide access to IAEA inspectors, under § 75.42, except "during normal working hours."

**Response:** To limit inspections to "normal working hours" could seriously interfere with the IAEA's ability to carry out its responsibilities. "During normal working hours" seems appropriate for visits under § 75.13 to verify installation information. However, the IAEA's safeguards regime cannot be effective if inspections outside of normal working hours are subject to restraints. In view of the relevant provisions of the Agreement (e.g., Article 9 (c)(i)), the scheduling of inspections, in practice, probably will not result in serious inconvenience to the licensee.

**Comment:** The rule should state that IAEA equipment will not be agreed to

by the United States if it impinges upon certain specified interests of the licensee (such as safety, protection of proprietary information, and product quality).

**Response:** The recommended criteria are not included in the rule because they will not be utilized in precisely the terms proposed. They are relevant, however, in determining whether or not, for example, the safeguards "avoid undue interference . . . in the operation of the facilities," the information to be provided is the "minimum" required by the IAEA. The standards that will be applied are those contained in the Agreement itself, as made clear by the reference thereto in § 75.42(e)(2).

**Comment:** Advance notification should not be required, under § 75.43, with respect to routine shipments, such as those recycling uranium hexafluoride heels.

**Response:** The issue will be considered in the development of Facility Attachments. Relief may be provided, where appropriate, by granting an exemption under § 75.3(a).

### Supplemental Rules

The Commission has determined that the rules set forth in this notice will permit timely implementation of the Agreement. However, certain additional details of the process will need to be treated by the time the Agreement enters into force, or shortly thereafter. For example, IAEA representatives must be assured of access to some items of classified information; to meet this need,

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appropriate rule changes, such as amendments to 10 CFR Parts 25 and 95, may be considered. Similarly, import and export regulations will be reviewed, with a view to adopting measures which will enable IAEA inspectors to discharge their functions without impediment. Any necessary rule changes will be made in accordance with established rulemaking procedures.

### Notice

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following new Part 75 and the following amendments to Parts 40, 50, 70, 150, and 170 of Title 10, Chapter I, Code of Federal Regulations, are published as a document subject to codification.

45 FR 73012

Published 11/4/80

Effective Date: Upon the US/IAEA Safeguards Agreement's entry into force and publication of notice thereof

in the Federal Register

Effective 12/24/80 \*

10 CFR Parts 70 and 75

### Safeguards on Nuclear Material; Implementation of US/IAEA Agreement

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Commission is amending its regulations to make it clear that licensees required to submit inventory change reports pursuant to the US/IAEA Agreement are not additionally required to submit nuclear material transfer reports under NRC domestic safeguards regulations.

**EFFECTIVE DATE:** Upon the US/IAEA Safeguards Agreement's entry into force and publication of notice thereof in the Federal Register.

**FOR FURTHER INFORMATION CONTACT:** Mr. L. C. Solem, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, DC 20555 (301-443-5903).

**SUPPLEMENTARY INFORMATION:** On July 31, 1980 the Nuclear Regulatory Commission published in the Federal Register (45 FR 50705) a new Part 75 to Title 10 of the Code of Federal Regulations and amendments to 10 CFR Parts 40, 50, 70, 150 and 170 to implement the Agreement Between the United States of America and the International Atomic Energy Agency for

the Application of Safeguards in the United States of America.

The Commission is amending 10 CFR Parts 70 and 75 to specify that licensees subject to 10 CFR 75.34, "Inventory change reports," are not required to provide the same information under 10 CFR 70.54, "Nuclear material transfer reports." The amendments are for purposes of clarification, as it was not intended that duplicate reports should be submitted.

Inasmuch as the amendments set forth below are of a minor and nonsubstantive nature, good cause exists for omitting notice of proposed rulemaking and public procedure thereon as unnecessary.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendments to Parts 70 and 75 of Title 10, Chapter I, Code of Federal Regulations, are published as a document subject to codification.

45 FR 84967

Published 12/24/80

Effective 12/24/80

10 CFR Parts 40, 50, 70, 75, 150 and 170

### Safeguards on Nuclear Material—Implementation of US/IAEA Agreement

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Confirmation of Effective Date.

**SUMMARY:** The Commission is providing notice of the entry into force of the US/IAEA Safeguards Agreement on December 9, 1980 and of the effective date of regulations to implement that Agreement.

**EFFECTIVE DATE:** December 24, 1980.

**FOR FURTHER INFORMATION CONTACT:** Mr. E. Morgan, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Phone 301-443-5903).

**SUPPLEMENTARY INFORMATION:** On July 31, 1980, the Nuclear Regulatory Commission published in the Federal Register (45 FR 50705) a new Part 75 to Title 10 of the Code of Federal Regulations and amendments to 10 CFR Parts 40, 50, 70, 150, and 170 to implement the Agreement Between the United States of America and the International Atomic Energy Agency for the Application of Safeguards in the United States of America (US/IAEA

Safeguards Agreement). Further, on November 4, 1980, the Nuclear Regulatory Commission published in the Federal Register (45 FR 73012) minor clarifying amendments to 10 CFR Parts 70 and 75, with regard to reporting under the US/IAEA Safeguards Agreement.

The Notice accompanying the rules stated that the effective date of both of these rulemaking actions were contingent "Upon the Agreement's entry into force and publication of notice thereof in the Federal Register." Notice is hereby given that on December 9, 1980, in accord with Article 24 of the Agreement, the United States provided written notification to the International Atomic Energy Agency that constitutional and statutory requirements of the United States for the entry into force of the US/IAEA Agreement had been met. Accordingly, the above referenced 10 CFR Part 75, changes thereto, and changes to 10 CFR Parts 40, 50, 70, 150, and 170 are effective on December 24, 1980.

\* Amended 45 FR 84967

## PART 150 • STATEMENTS OF CONSIDERATION

On February 8, 1974, the Atomic Energy Commission published in the *FEDERAL REGISTER* (38 FR 4930) proposed amendments to its regulations in 10 CFR Part 70, "Special Nuclear Material," and 10 CFR Part 150, "Exemptions and Continued Regulatory Authority in Agreement States Under Section 274," which would require reporting of theft or attempted theft of special nuclear material in the interest of the common defense and security.

Interested parties were invited to submit comments and suggestions for consideration pertaining to the proposed amendments by March 25, 1974. Upon consideration of the comments received, and other factors involved, the Commission has adopted the proposed amendments with minor editorial and clarifying changes.

These reporting requirements are being promulgated as part of an overall AEC effort to strengthen the protection of strategically important special nuclear material.

In the interest of the common defense and security, the Commission has found that good cause exists for making the amendments effective upon publication in the *FEDERAL REGISTER* without the customary 30-day notice.

Pursuant to the Atomic Energy Act of 1954, as amended, and sections 552 and 553 of Title 5 of the United States Code, the following amendments of 10 CFR Parts 70 and 150 are published as a document subject to codification.

40 FR 8774  
Published 3/3/75  
Effective 3/3/75

*Energy Reorganization Act: Revisions to Chapter 1 to Reflect Organizational and Procedural Changes*

See Part 2 Statements of Consideration.

41 FR 16445  
Published 4/19/76  
Effective 4/19/76

*Miscellaneous Changes to Chapter*

See Part 20 Statements of Consideration.

41 FR 18300  
Published 5/3/76  
Effective 6/2/76

*Preservation of Records*

See Part 20 Statements of Consideration.

42 FR 25721  
Published 5/19/77  
Effective 5/19/77

*GAO Clearances; Reporting and Record Keeping Requirements*

See Part 20 Statements of Consideration.

42 FR 33265  
Published 6/30/77  
Effective 6/30/77

*Certain Reporting Dates Changed*

See Part 30 Statements of Consideration.

42 FR 43965  
Published 9/1/77  
Effective 9/1/77

*Amendments to Chapter to Revoke or Revise Certain Reporting Requirements*

See Part 20 Statements of Consideration.

44 FR 43280  
Published 7/24/79  
Effective 11/21/79

*Safeguard Requirements for Special Nuclear Material of Moderate and Low Strategic Significance*

See Part 70 Statements of Consideration.

44 FR 50012  
Published 8/24/79  
Effective 8/24/79  
Comment Period expires 10/24/79

*Uranium Mill Tailings Licensing*

See Part 40 Statements of Consideration.

44 FR 68184  
Published 11/28/79  
Effective 3/25/80

*Physical Protection Upgrade Rule*

See Part 73 Statements of Considerations.

45 FR 12377  
Published 2/26/80  
Effective 2/26/80

*Uranium Mill Tailings Licensing*

See Part 40 Statements of Consideration.

45 FR 14199  
Published 3/5/80  
Effective 3/5/80

*Minor and Clarifying Amendments*

See Part 1 Statements of Consideration

45 FR 18905  
Published 3/24/80  
Effective 3/24/80

*Deletion of reference to Panama Canal Zone; Minor Amendments*

See Part 4 Statements of Consideration.

45 FR 50705  
Published 7/31/80  
Effective 7/31/80  
Effective Date 12/24/80 \*

*Safeguards on Nuclear Material-Implementation of US/IAEA Agreement*

See Part 75 Statements of Consideration.

45 FR 65521  
Published 10/3/80  
Effective 11/17/80

*Uranium Mill Licensing Requirements*

See Part 30 Statements of Consideration.

45 FR 74693  
Published 11/12/80  
Effective 11/28/80

*Licensing Requirements for the Storage of Spent Fuel in an Independent Fuel Spent Storage Installation*

See Part 72 Statements of Consideration

\* Amended 45 FR 84967





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an application for a construction permit concurrently on file for the same site, except where the application for the construction permit is withdrawn by the applicant or denied by the Commission.

5. The classes of amendments for facility permits, licenses, or approvals, have been revised extensively. Although six classes remain, the descriptions have been amplified and clarified. The footnote in § 170.22, which would exempt from fees amendments issued pursuant to Commission orders, has been broadened to provide that Classes I, II, and III amendments, which result from written NRC requests, may be exempted from fees at the discretion of the Commission when the amendment is issued for the convenience of the Commission.

6. The definition of special projects has been broadened to cover applications or requests to amend or renew Preliminary Design Approvals or Final Design Approvals for standardized reference designs filed by vendors and architect-engineers. Accordingly, fees for such applications or requests will be based on actual expenditures for professional manpower and support services.

7. The schedule of inspection fees has been modified to show the maximum number of charges which will be assessed against a license during a specified period. The proposed schedule did not set an upper limit. Licensees may be inspected more frequently than shown in the schedule, however, the number of charges will be limited by the schedule.

8. Several new fee subcategories have been developed for Category 1H licenses which authorize the receipt and storage of spent fuel. The new categories take into consideration factors which affect the scope of the licensing review. This includes whether or not the facility will be based on an approved standardized design or a custom design, and whether the facility will be located on a site for which an environmental and site safety review have been performed and documented when the license application is filed with the Commission. A new fee Category 12, covering the review of a standardized spent fuel facility design, has been established. The new categories will accommodate the new standardization concept in licensing.

9. Several new fee categories have been developed for the review of packages and containers used in the transportation of licensed radioactive materials. The new categories are designed to cover the smallest practical units used in transportation.

10. Materials license fee Categories 1A through 1G, 2A through 2C, and 4A, of § 170.31 have been modified to split the application fee shown in the proposed schedule into an application fee and license fee. The total charge will remain the same as shown in the May 2, 1977 notice. The modifications make the method of assessing fees for

fuel cycle applications and licenses consistent with that used for Part 50 facility licenses.

11. The definition of materials license fee Categories 1A, 1C, 1D, 1E, 1F, and 1G, of § 170.31 and § 170.32 have been modified to make the language consistent with Part § 73.1 and equivalent sections of Part 70 with respect to safeguards application requirements.

12. Footnote 1 to § 170.31 has been revised to provide that an application for a license, license renewal, or license amendment, covering more than one fee category of special nuclear material, except Category 1H (spent fuel storage), will be subject to the category having the highest fee, provided, however, the use of the material is confined to one location. The purpose of this change is to clarify the intent of the Commission to limit fees to the direct and indirect costs of the licensing review or inspection.

13. § 170.31 has been revised to clarify the intent that applications for licenses to manufacture and distribute encapsulated byproduct material or special nuclear material for use in power generation are not subject to the charges in fee Categories 1J and 3A. Also, fee Category 10 covering power sources has been revised to clarify that reactor start-up sources are not considered sources used for power generation.

14. Fee Categories 1D through 1G, and 1J have been revised to clarify the intent that these categories cover licenses which authorize research and development and that the radioactive material is in an unsealed form.

15. A footnote has been added to § 170.31 which specifies that an applicant for a license or license amendment which would authorize both byproduct material and special nuclear material contained in sealed sources for use in gauging devices will pay a single fee under fee Category 1I. This change takes into account the Commission's intent to limit fees to the direct and indirect costs of the licensing review.

16. Fees have been established for renewal of Commission "Approvals" for packages and containers used in the transport of radioactive materials. The renewal fee was inadvertently omitted in the proposed schedule.

17. The terms "duplicate unit", "replicate unit", "reference systems concept", and "Advanced Reactors", have been added to § 170.3 for clarification purposes. The definition of "waste disposal license" has been deleted as unnecessary.

18. A footnote has been added to § 170.32 which provides that, where more than one permanent radiography installation is shown on a materials license as authorized locations of use, a separate fee will be assessed for the routine inspection of each location, provided, however, that if the multiple installations can be inspected during one visit a single inspection fee

will be assessed.

19. The regulation in § 170.12 concerning the remittance of fees by applicants and licensees has been revised in its entirety to accommodate the amended rule.

20. The schedule of amendment fees for materials license Categories 1A through 1H, 2A through 2C, 4A and 4B, and 11A through 11D, have been modified to add fees for "Administrative" type amendments. Footnote 3 to § 170.31 has been amended to define administrative amendments. The modification will accommodate those requests from licensees which are routine or administrative in nature (e.g. name changes, minor word changes in licenses or approvals, etc.).

21. The proposed amendment fee for materials fee Category 2B has been redesignated as a major safety and environmental amendment fee. A new category designated as minor safety and environmental amendment has been established for fee purposes. These changes make the amendment fees for Category 2B consistent with those established for other major fuel cycle licenses.

22. Footnote 4 of § 170.21 (previously designated as footnote 10) has been broadened to provide for a maximum fee of \$20,000 for the review of a topical report. The fee will be based on actual expenditures incurred for professional manpower and support services. The fee in the proposed schedule was open-ended.

23. Footnote 1.d. of § 170.31 has been revised to provide that the Commission may exempt from fees applications for amendments to materials licenses and approvals which result from a written NRC request and the amendment is issued for the convenience of the Commission.

24. Footnote 4, of § 170.31, which provides for the charging of fees based on actual manpower and support services required to process the application, has been added to Categories 1D through 1G of § 170.31. This approach is consistent with other fuel cycle licenses where the professional manpower and appropriate support services will be determined and the resultant fee assessed, but in no event will the fee exceed that shown in § 170.31.

25. The method of payment for Preliminary Design Approvals or Final Design Approvals has been modified to require the application for approval to be accompanied by an application fee of \$50,000, and to require the approval fee to be paid in five installments based on payment of 20 percent of the fee for each of the first five units of the approved design referenced in an application filed by a utility or utilities. Approval fees for additional designs, filed in a single application are subject to a maximum fee which is the sum of the application fee and the approval fee.

### RULEMAKING PETITIONS

On May 2, 1974, Conner, Hadlock

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and Knotts, a Washington, D.C., law firm, filed a petition for rulemaking on behalf of 13 electric utilities with the Nuclear Regulatory Commission (at that time the Atomic Energy Commission) to amend the license fee schedules specified in 10 CFR Part 170 by reducing the fees for nuclear power reactor licenses. The petition cited the March 4, 1974 decisions of the Supreme Court, referred to previously. This petition was docketed as PRM-170-2 and a notice was published in the FEDERAL REGISTER on May 21, 1974.

In a letter dated February 7, 1975, the petitioners moved the Commission to limit fees to be charged in the future to the amounts specified in their petition of May 2, 1974, with respect to application fees, construction permit fees, and operating license fees, until the matter of appropriate fees is finally resolved by court or legislative action and to consolidate into Docket PRM-170-2 the Commission initiated rulemaking proceeding regarding the proposed amendments to 10 CFR Part 170. The Commission denied the petitioner's request for a temporary reduction of fees as made in their letter of February 7, 1975 and granted the request to

consolidate Docket PRM-170-2 with the Commission's ongoing rulemaking proceeding in connection with the proposed amendment of 10 CFR Part 170 (40 FR 33736).

The Nuclear Regulatory Commission has developed a revised schedule of license fees in 10 CFR Part 170 consistent with the holdings of the Supreme Court decisions and the United States Court of Appeals for the District of Columbia Circuit in its December 16, 1976 decisions in the Federal Communications Commission cases.

Under these Courts' decisions, we find no basis for granting the petitioner's request for a reduction of licensing fees to approximately five percent of the current level in 10 CFR Part 170. Under the guidance provided by the Court of Appeals, fees may be assessed to persons who are identifiable recipients of special benefits conferred by specifically identified activities of the NRC. Special benefits include services rendered at the request of a recipient, all services necessary for the issuance of a required license, and all services necessary to assist a recipient in complying with statutory obligations or obligations under the Commission regulations. Under the revised schedule, the direct and indirect costs incurred in providing special benefits as described above were used in fee calculations.<sup>1</sup>

The Atomic Industrial Forum also filed a petition to amend the license fee schedule (PRM-170-1, 39 FR

15521). The Commission's independent rule making proceeding on license fees has rendered the petition moot. Accordingly, it is denied.

Following the Supreme Court decisions on March 4, 1974, in *National Cable Television Association, Inc. v. United States* 415 U.S. 336 (1974), and *Federal Power Commission v. New England Power Co.*, 415 U.S. 345 (1974), the Commission eliminated annual license fees and notified licensees that a request may be filed for refund of annual fees collected. We again advise licensees that a refund of annual fees is available. A request for refund should include the name and address of the licensee and the license number. Each specific annual fee refund claim should include the invoice number, the amount paid by year, the amount of the refund requested, and the amount of any previous refund.

Request for refunds should be mailed to the Office of the Controller, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, and sections 552 and 553 of Title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Part 170, are published as a document subject to codification to be effective March 23, 1978.

43 FR 11815  
Published 3/22/78  
Effective 3/23/78

### PART 170—FEES FOR FACILITIES AND MATERIALS LICENSEES AND OTHER REGULATORY SERVICES UNDER THE ATOMIC ENERGY ACT OF 1954, AS AMENDED

#### Revision of Fee Schedule

##### Correction

In FR Doc. 78-4355, appearing at page 7210, in the issue for Tuesday, February 21, 1978, make the following corrections:

43 FR 15408  
Published 4/13/78  
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### PART 170—FEES FOR FACILITIES AND MATERIALS LICENSEES AND OTHER REGULATORY SERVICES UNDER THE ATOMIC ENERGY ACT OF 1954, AS AMENDED

#### Revision of Fee Schedule

##### Correction

On page 11815 in the issue for Wednesday, March 22, 1978, there appeared a correction to FR Doc. 78-4355 which appeared at page 7210 in the issue for February 21, 1978. In item "6." of the correction document, an incorrect reference was made to a paragraph "1(b)" in § 170.32. It should have referred to paragraph "1(H)(3)(b)". Therefore, the beginning of item "6." of the part of the correction now reading: "On page 7225, in 1(b) of § 170.32, first line, "21 per year" should read "1 per year"; . . ." should be changed to read as follows: "On page 7225, in 1(H)(3)(b) of § 170.32, first line, "21 per year" should read "1 per year"; . . ."

Please note that the rest of the correction is accurate and remains unchanged.

45 FR 50705  
Published 7/31/80  
Effective 7/31/80  
➤ Effective Date 12/24/80 \*

Safeguards on Nuclear Material:  
Implementation of US/IAEA Agreement

See Part 75 Statements of Consideration.

\* Amended 45 FR 84967